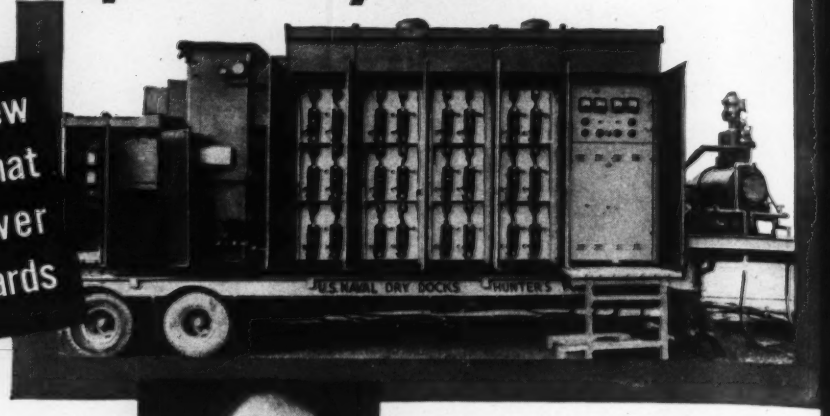
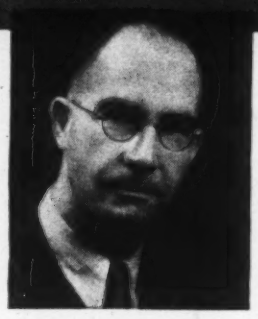
ENGINEERING NEWS-RECORD

Bailey Bridge emerges from censorship; here being used in Italy. See p. 3

Putting D-c on Wheels for Ships in Drydock

The story of a new portable rectifier that brings d-c power to ships in a-c yards





by C. P. Hamilton

Industrial Engineering Division
General Electric Company

Under the stimulus of war requirements, several new types of portable power units have been developed. It is very probable that this equipment will find a wide application in the construction industry. Here's a unit developed recently for the Navy.

ONE of the expensive obstacles to servicing ships in drydock has been the lack of d-c power *where it was needed.* Because ships under repair cannot furnish their own d-c power, and most shipyards use only a-c, the problem became acute early in the war when an increasingly large number of ships had to be serviced quickly —and at the same time.

Conversion at a centrally located point meant using miles of heavy copper conductors, and many large receptacles. The excessive use of scarce material and man power made this economically inadvisable.

The solution of this problem is a portable rectifier that can be moved close to where d-c power is needed. Mounted on a trailer, the entire equipment weighs 20 tons. In the installation shown here, the deck is 25 feet long by 8 feet wide. Additional area on the gooseneck provides space for part of the cooling system, and for storing cable, hose, platform, and steps when moving the rectifier to new locations. Screw jacks are provided to support and level the gooseneck end.

The rectifier illustrated above has served several famous ships. It converts 500 kw a-c to d-c by means of sealed ignitrons. As shown in the picture, component parts (from left to right) are:

Incoming line compartment
Circuit breaker
Control transformer compartment
Forced Pyranol-cooled transformer
Rectifier units mounting ignitrons
Direct-current control unit with electrically operated air circuit breaker
Two heat exchangers, one for the rectifier cooling water, and the other for the transformer Pyranol.

Equipment Features

1. The rectifiers and transformers are water cooled—in this dock installation, salt water is delivered to the heat exchangers by the dock pumps. The distilled water from the rectifier is circulated through its heat exchanger by its own vertical circulating pump.
2. Entire equipment is salt-air and corrosion resistant.
3. A special disconnecting device is used to attach incoming a-c line cable to the compartment on the left. Cables from the d-c distribution section at right are bolted from below directly to the bus bars in the d-c cubicle. (Bus bars are provided also for parallel connections.) These provisions make it possible to move the rectifiers from one location to another with little loss of time.

In developing this portable unit for shipyards, G.E. has also made another contribution to the construction industry. Mobile units for generating and distributing electric power will be needed to capitalize the great advantages of electrified construction machines. G.E. has developed such mobile units—a-c and d-c—which will safely speed construction work by providing electric power wherever it is needed. General Electric Co., Schenectady 5, New York.

Buy all the BONDS you can—*and keep all you buy*

GENERAL ELECTRIC

The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • JULY 20, 1944 • VOLUME 133 • NUMBER 3

Ontario engineers favor own bargaining group

Large majority express themselves as in favor of collective bargaining under the new Canadian labor law through an organization of professional engineers

Members of the Association of Professional Engineers of the Province of Ontario, by a large majority, have declared themselves to be in favor of collective bargaining through a group to be made up of professional engineers. Their action was the outgrowth of a federal order-in-council passed on Feb. 17 of this year, which makes collective bargaining obligatory on the part of most employers and employees in Canada during the war period. An employee is defined under that order as "a person employed . . . to do skilled and unskilled manual, clerical or technical work." The only exemptions are persons employed in a "confidential capacity and those having authority to employ or discharge employees."

Exemptions sought

Subsequent to the passage of the order, representatives of the engineering organizations of Canada appealed to the Wartime Labor Relations Board to have persons employed in a professional capacity exempted from the provisions of the act as being employed in a confidential capacity (*ENR*, May 18, page 724). As a result, the board made such an exemption for professional engineers for a period of six months in order to give the engineers an opportunity to determine the views of their members as to whether or not they wished to be included under the collective bargaining provisions of the order-in-council.

Ontario engineers canvassed

Associations of professional engineers in Canada have a semi-official status as the qualifying agency for the licensing of professional engineers to practice in the several provinces. All licensed engineers are automatically members of the association in the province in which they are registered.

In sending out its questionnaire, the council of the Ontario association stated that last year, when the Ontario government was considering legislation with respect to collective bargaining, it had attempted to have its members excluded, but had been only partly successful. An exclusion clause was added, but it was not all inclusive.

The council stated further that under the Ontario act, and now under the new federal order-in-council, unions can assume bargaining rights for engineering employees, and that as a result, the only way in which engineers can assert their own rights is to set up bargaining agencies for professional persons.

As the association itself cannot act as a bargaining representative for its members, the council unanimously decided to encourage its members to form their own organizations for the purpose of collective bargaining.

Professional group favored

The Ontario association has a total membership of 5,737 of whom 3,221 are registered or licensed engineers and 2,516 are engineers-in-training. The questions put to the members by the council of the association, together with the number of replies to each question, are given in the accompanying table.

HOW ONTARIO ENGINEERS VOTED

I. Which of the following do you want as your collective bargaining agency:	
Trade unions	15
Employee associations (company unions)	23
A professional engineers group	2,150
II. Do you consider yourself to be an employee engineer?	
Yes	1,252
No	991
III. Are you willing to join a group of professional engineers constituted for the purpose of collective bargaining?	
Yes	1,906
No	219

Of those who voted, the large majority of the engineering employees expressed themselves as willing to join a collective group made up of professional men.

Other provinces to act

It is expected that a similar survey of the views of the membership of the professional associations in other provinces will be made. The Engineering Institute of Canada has set up a committee to recommend the procedure that the Institute should take with respect to this question.

• • •

H. A. Kemp to direct D.C. sanitary engineering

Harold A. Kemp, who since 1940 has been head engineer in the office of Chief of Engineers, U. S. Army, has resigned to become director of sanitary engineering for the District of Columbia. He will have charge of all water, sewerage and refuse activities. He succeeds the late John Blake Gordon.

Mr. Kemp has been associated with the district office on two previous occasions, first as general superintendent of design and construction for the sewage treatment plant and for rebuilding the pumping station, between 1934 and 1937; and again as chief engineer, Department of Sanitary Engineering, 1938-1940.

He was graduated with a B.S. degree from Virginia Polytechnic Institute, Blacksburg, Va., in 1917, and later was a student at Rutgers University. He has served as construction engineer for the Dupont Engineering Co., Buffalo, and as construction engineer for George C. Diehl, Inc., also of Buffalo. In earlier years he was senior engineer for the Corps of Engineers at which time he was chief of design for the Illinois Waterways, and later for the Upper Mississippi River Project. He also served as principle engineer of the North Atlantic Division office.

Lumber labor trouble impedes Navy jobs

Shortage of construction lumber, mainly attributed to recent strikes and existing unrest among 30,000 lumber workers in the Pacific Northwest, in mid-July was seriously impeding progress on some $400,000,000 of West Coast Navy construction contracts.

The shortage of lumber materials developed at a time when contractors engaged in carrying out huge Navy contracts already were harassed by insufficient manpower to meet their heavy requirements.

Curtailment of lumber shipments from Washington and Oregon served to postpone for the time being a definite conclusion among contractors as to the success or failure of the recent Navy-A. F. of L. agreement under which the unions were to recruit labor from less critical areas and transport it to the job at government expense.

In the first reference to this agreement (*ENR* June 22, 1944, page 905) we reported that this agreement relieved the contractor from the responsibility of recruiting labor "outside of a 100-mile radius of the project". We are informed by the Navy that this is incorrect, and that the contractors are not relieved of this responsibility. The Navy points out that in most cases the actual employment of labor has increased steadily, if slowly, on its important construction projects.

Also related to the acute manpower shortage on the Pacific Coast is the recent Navy approval of deletion of the "liquidated damages" clause from all Bureau of Yards and Docks contracts. Under this clause contractors were penalized for failure to complete their work on scheduled time.

. . .

Serious water shortage in Cleveland, Ohio

A prolonged drought in the Cleveland, Ohio, area is seriously curtailing war production and bringing drastic restrictions on household use of water. Greatly increased industrial use of water in the last two years, plus inability to obtain additions to pumping facilities, left the municipal waterworks unable to keep pace with consumption.

Hardest hit by the shortage was the Fisher Aircraft Plant No. 2, at Cleveland Airport, where more than 5,000 man-hours of production have been lost since June 17, when it frequently became necessary, as water pressure fell, to discontinue work in the heat-treating, spot welding, and hydro press divisions. On occasions the plant dipped into its 300,000 gal. fire protection reserve, stored in underground tanks, to continue operations. Employees were ordered to bring drinking water because pressure was insufficient to supply fountains. An auxiliary supply brought from the nearby Berea waterworks prevented greater disruption of Fisher production.

Increase in industrial demand

Municipal officials joined in a proclamation banning all sprinkling by householders, and enforced it by police and Civilian Defense workers. In explanation of the shortage, Utilities Director Emil Crown cited these typical increases in industrial use of water in the last year: N.A.C.A. aircraft laboratory, from 200,000 to 400,000 gal. daily; the Army's Crile General Hospital, from 30,000 to 200,000 gal.; Fisher Aircraft plant, from 100,000 to 500,000. Two years ago the city was refused a WPB priority to add a 20 m.g.d. steam pump to augment its daily capacity of 140,000,000 gallons, in anticipation of this demand. However, some portion of the responsibility is said to rest in the failure of the city purchasing department to stock a supply of natural rubber valves for an existing 20 m.g.d pump. The synthetic material currently being used for the flow regulators has not given satisfactory service, and has necessitated frequent shutdowns for replacement, as well as causing below-capacity production at other times.

On the possibility that some engineering resource to alleviate the situation might have been overlooked, the administration employed C. S. Timanus of Burns & McDonnell Engineering Co., Kansas City, to check the waterworks operation. Federal officials also indicated their concern by sending to Cleveland Frederick Weed, chief of the water division of WPB's office of war utilities, to get information. Mr. Weed approved the no-sprinkling order, and said that when a similar situation confronted Detroit last year cessation of all use of water for gardens and lawns reduced peak consumption by a fifth.

Agreement reached on wartime construction

Following a dispute that has lasted for many months, Army and Navy authorities in San Francisco have come to an agreement with the City of San Francisco over the extent to which the city will exercise control over building construction carried out within the city limits by the Army or Navy for the duration of the war.

Relations between the Army, Navy and the San Francisco Fire Department became strained soon after Pearl Harbor when the armed forces leased a large number of downtown buildings and employed private contractors to remodel them. Fire Chief Albert J. Sullivan requested permission for his men to inspect the work. The Army and Navy refused his request.

Events came to a head during the first week of April when fire razed a $500,000 Army warehouse, and firemen were faced with the dilemma of endeavoring to adjust their equipment to off-size hydrants. Chief Sullivan later declared that his men, in one instance, found it necessary to dig underground to reach a valve which their standard wrenches would not fit.

Mutual cooperation promised

In the face of Chief Sullivan's charges, Army and Navy officials at San Francisco took up the matter with Washington and a series of conferences was arranged between the Army, Navy and city officials concerned with inspection of buildings within the city limits. As a result, it was announced on July 6 by the Twelfth Naval District that when the Army or Navy contemplate construction or remodeling of buildings in San Francisco, a representative of the city department concerned will be invited to collaborate in the preparation of the plans; copies of plans and specifications will be furnished to the city, and the city departments concerned will be invited to inspect the work. In so far as directives from higher authorities with respect to the use of strategic materials will permit, the Army and Navy have agreed to abide by the suggestions of the city inspection bureaus and by the provisions of local ordinances and state laws. The city has agreed to waive certain formalities with regard to applications for building permits, etc.

ENGINEERING NEWS-RECORD. Published every Thursday. **Return postage guaranteed.** Vol. 133, No. 3. Price 25c per copy. Allow at least ten days for change of address. All communications about subscriptions should be addressed to the Director of Circulation, 99-129 N. Broadway, Albany, 1, N. Y., or 330 W. 42nd Street, New York, 18, N. Y. Subscriptions, United States, U. S. Possessions and Latin American Republics, $5.00 for one year, $8.00 for two years, $10.00 for three years. Canada, $6.00 for one year, $10.00 for two years, $12.00 for three years. Great Britain and British Possessions 60 shillings for one year, 120 shillings for three years. All other countries, $9.00 for one year, $18.00 for three years. Entered as second-class matter October 29, 1938, at the Post Office at Albany, N. Y., under the Act of March 3, 1879. Printed in the U.S.A. Cable Address: "McGrawhill New York." Member A.B.P. Member A.B.C. Copyright 1944 by McGraw-Hill Publishing Company, Inc., James H. McGraw, Founder and Honorary Chairman; James H. McGraw, Jr., President; Howard Ehrlich, Executive Vice-President for Business Operations; John Abbink, Executive Vice-President for Editorial Operations; Curtis W. McGraw, Treasurer; Joseph A. Gerardi, Secretary; J. E. Blackburn, Jr., Circulation Manager. **Publication office: 99-129 North Broadway, Albany, 1, N. Y. Editorial and Executive Offices: 330 West 42nd St., New York, 18.** District Managers and Branch Offices: Fred G. Hudson, 520 N. Michigan Ave., Chicago 11; 738-9 Oliver Building, Pittsburgh; J. W. Otterson, 68 Post St., San Francisco, 4; Aldwych House, Aldwych London, W. C. 2, England; Washington; J. M. Spackman, New York; A. R. Cozzens, Philadelphia; E. E. Duff, Jr., Cleveland; R. F. Horn, Detroit and Chicago; Richard Y. Fuller, St. Louis; R. N. Phelan, Los Angeles; J. I. Ballard, Boston; Ralph Maultsby, Atlanta, Ga.

tate operation for entral Valley project?

preliminary study of the feasibility tate operation of California's Cen- Valley project was ordered June 27 he State Water Project Authority as outcome of a hearing during which erior Secretary Harold L. Ickes' "so- ideas" were blamed for delaying truction of the huge project.

ppearing before the authority at a ting in Sacramento, Roland Curran, retary-manager of the Central Val- Project Association, a private or- ization, charged that Secretary Ickes the U. S. Bureau of Reclamation using the project "as a weapon of rcion to impose upon our people a gram of social changes developed fostered by bureaucrats in Wash- ton."

Mr. Curran further charged that while Central Valley Project was con- ved as an irrigation undertaking, truction of the irrigation units has n neglected and that no major unit the project has been completed spite expenditure of nearly $160,000,-) and a lapse of 10 years.

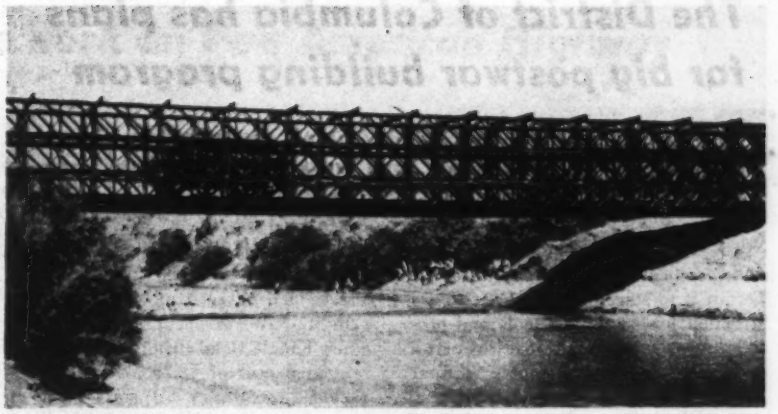
Another witness, E. G. Burke, presi- nt of the Kern County Farm Bureau, o asserted the delays were to be at- buted to Secretary Ickes "social as" and the failure of the Bureau of clamation to cooperate with interested al agencies in making CVP policies.

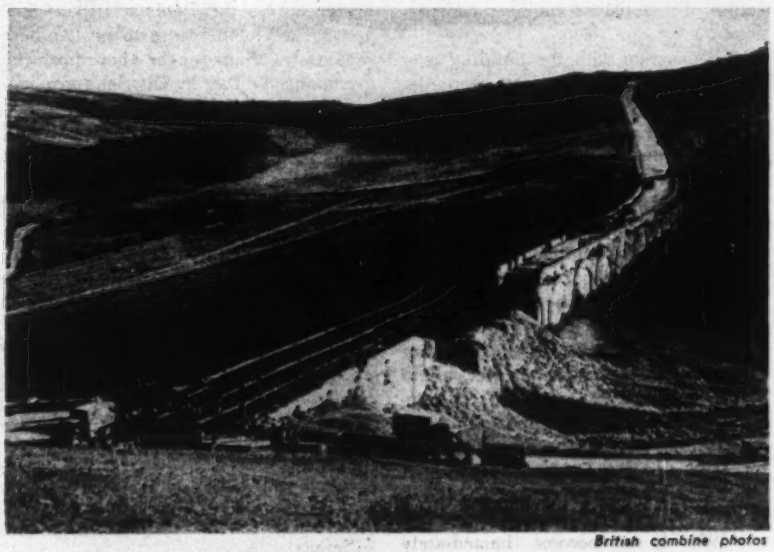
Secretary Ickes and the Bureau of clamation were defended, however, California's Attorney General Robert Kenny, a member of the project thority, who attributed the delays to e fact that needed materials have been erted to war industries.

That California would find it diffi- lt, if not impossible, to gain juris- ction of the project even if it de- ded to make the attempt was con- dered a foregone conclusion. Control the project now rests in the hands of e government and to turn that control er to California would require an act Congress.

Attorney General Kenny in a state- ent made upon his return to San Fran- co pointed out that while California ted a $170,000,000 bond issue 10 ars ago to finance construction of the oject, a relatively small amount of e money has been expended. Of the early $160,000,000 that has been spent date, about $133,000,000 was supplied the federal government, he said.

The authority instructed State Engi- er Edward Hyatt to submit at the dy's next meeting a report on the obable costs of a complete review of e matter and the feasibility of state nagement of CVP.





British combine photos

Britain's Bailey Bridge is U. S. standard too

Although Army censorship has now and again permitted veiled references to a remarkably efficient military bridge that is assembled from standard units, the above pictures are among the first to be released. Known as the Bailey Bridge, for its inventor D. C. Bailey, British structural engineer now in the employ of the British Ministry of Supplies, it is standard equipment for U. S. Army Engineers as well as the Royal Engineers. It proved itself in Africa, Sicily and Italy, and is now being used in France.

Basic unit is a 10 ft. long section containing 17 parts, including trusses, floorbeams, stringers, fittings, etc. Capacity of the bridge is increased by adding truss panels, both outside and on top of the original panels to a maximum of three high, three wide. Such an assembly is shown in the top view where a span of about 240 ft. crosses a North African stream. In the lower view one tier of truss units is being used as a base on which another tier is slid forward to close the span of a wrecked viaduct in Italy. The Bailey Bridge units are also used with pontoons to cross streams of any width.

Baltimore water project to cost $6,000,000

Baltimore, Md., expects to award contracts in the fall for augmenting the municipal water supply if the War Production Board approves the city's request for authority to do the work, Leon Small, chief engineer of the Bureau of Water Supply, announced July 10.

The work planned calls for the construction of 29,000 ft. of pipeline from Hollofield, above Ellicott City on the Patapsco River, to connect at Liberty road and the western city line with a seven-mile tunnel running to the Montebello filtration plant. The work would cost about $6,000,000 and would be paid for from the $12,500,000 water loan which was approved by the voters in 1943.

Baltimore's consumption of water has been heavy. During June the average daily consumption was about 182,000,000 gallons.

The District of Columbia has plans for big postwar building program

Total program involves $45,000,000 of construction; plans are complete for many projects, and work can proceed as soon as materials are available

The District of Columbia has plans and specifications under way which will permit it to start on a $45,000,000 construction program of schools and other buildings, roads and roadway structures; sewer, water, and other sanitary projects, as soon as funds and materials are available, according to Col. J. D. Arthur, Jr., assistant engineer commissioner.

In connection with the building program, a number of projects were deferred when the shortage of critical materials developed, Col. Arthur says. These included three schools, and additions to two other, to cost $2,440,000, for which funds have been appropriated, and for which plans and specifications have been completed.

Also deferred was construction of an incinerator, a fire engine house, a health center, a receiving home for children, and new dormitories at the District Training School at Laurel, Md., all to cost $985,000.

Funds have been appropriated for the preparation of plans and specifications for four additional schools for which the total construction cost will be $2,073,150. Additional funds in an amount of $92,674, to become immediately available and to remain so until expended, were provided by the District of Columbia 1945 Appropriation Act, for plans and specifications for ten other school buildings, estimated to cost $2,869,000.

In regard to the highway program, plans and working drawings and specifications for numerous projects are complete or in progress. In addition to $2,220,900 of new street paving projects, a $200,000 grade separation structure over the B. & O. Railroad at Riggs Road, N.E., and another over the same railroad at Kansas Ave. N.E., are being planned. Construction funds are available, and plans are complete for a new bridge over the Anacostia River at South Capitol St., estimated to cost $4,500,000.

Extensive highway program

Plans have also been completed, but no construction funds are available, for an underpass at Dupont Circle, estimated to cost $1,250,000; and for the K Street, N.W. elevated highway between Rock Creek and Key Bridge, to cost $2,200,000. Plans are being prepared for a K Street, N.W., depressed highway between 21st St. and Rock Creek; a K Street trunk highway from 12th St., N.W., to North Capitol St.; and a new Kingle Road Bridge; all at a total estimated cost of $8,200,000. It is expected that work will start soon on plans for a new $5,000,000 14th Street bridge across the Potomac. Plans for approaches to these are to be handled separately. Plans for the above projects are financed either by District appropriation or federal aid funds.

Specifications for 23 additional projects, including two railroad-highway grade separations, one highway grade separation, 14 paving and six roadway widening projects, are 24 percent complete. This planning is being financed with reapportioned federal aid funds.

Preliminary plans and engineering surveys, also under way, and financed from the same funds, include work on an inventory of roadways and traffic field studies; and studies of the central metropolitan area, and three problems at intersections.

The Sanitary program

For immediate letting:		
Sewers		
In connection with street paving program	$651,785	
Independent of paving program	405,700	$1,057,485
Sewage treatment plant—pumps and gas engines, additional sludge digestion tanks, and sea wall		632,000
Water (distribution branch)		1,905,000
City refuse—four-furnace incinerator, transfer station, trucks		1,569,700
Three public convenience stations		38,800
Total		$5,202,985
For letting within few months after war:		
Sewers		$3,657,105
Sewage treatment plant—sludge drying facilities (incinerator)		300,000
Water (Distribution branch)		495,000
Total		$4,452,105
For letting at intervals after the war, to keep contractors' forces engaged:		
Sewers		$1,235,517
Water (Distribution branch)		1,072,000
Total		$2,307,517
Grand total		$11,962,607

The Sanitary Engineering Department, with its numerous divisions, also has a large program. It includes sewer, sewage treatment, water distribution, city refuse, and public convenience stations, only the last of which, however, have been authorized by Congress. The program will cost $11,962,607, none of which has yet been appropriated. The figures on this program appear in the middle column.

New sewers

The Sewer Division estimates that of its part of this program, plans and specifications being prepared for construction immediately after the war, amounting to $405,700, are 90 percent complete; those for construction in advance of highway paving immediately after war, $399,205, are 50 percent finished; those to be ready at regular intervals after war, $1,235,517, are 7 percent finished; those to be prepared by a consultant for immediate after-war construction, $3,657,105, have not yet been started, nor have plans for the $5,130,500 worth of work to be postponed indefinitely. The Highway Department is to be asked to have its consultants prepare plans for sewer work as part of highway work, in an amount of $252,580.

• • •

Low bid is announced on Chicago water plant

Priorities for materials to enclose the steelwork on the superstructure of the 79th St. water filtration plant in Chicago and for construction of administration buildings have been granted by WPB. The release of materials came just before receiving bids for the work, which were opened July 10. The new contract will complete all work above ground on the huge plant, largest of its kind in the world. W. W. DeBerard, city engineer, announced that while the superstructure will not be completed for about a year, the plant will go into partial operation sometime this fall. Steelwork for the superstructure was completed last fall, and construction of the pumping plant and chemical building is about finished.

Low bidder on the proposals opened last week was S. N. Nielsen Co., Chicago at $1,689,700, including heating, plumbing and piping.

Washed out by torrential rains in 1933, and since unused, 12 miles of Northern Pacific Railroad's trackbed in Montana, between St. Regis and Henderson, will be converted into a 30-ft. automobile highway after the war.

Mexico pushes work on Pan American Highway

Photos by W. H. Furlong

Much of its length the Pan American Highway in Mexico crosses mountainous terrain requiring extensive rock excavations.

A combination of mechanical equipment and hand labor must be used on the earthmoving operations because of the shortage of trucks and other heavy construction equipment.

Small bridges are being built as non-reinforced masonry arches to eliminate the need for reinforcing steel which is also in short supply in Mexico.

Construction to eliminate a 410-mi. gap on the Pan American Highway between Mexico City and the Guatemala border is well advanced, the federal highway department of Mexico having given the work a high priority. About 6,000 men are employed on the job, including much hand labor recruited from Indian colonies in southern Mexico.

The highway passes through highly diversified terrain, including mountains, lowlands and desert areas. Construction is difficult and includes a great deal of rock excavation.

A road surfaced with crushed stone, and in some places with bituminous materials, is being built. It is being constructed sufficiently wide for two-way traffic. Where mechanical equipment is lacking, workers use hand sledges to prepare the crushed rock needed for the surfacing operations.

In addition to the lack of sufficient construction equipment, the work is slowed by a shortage of spare parts and tires for the trucks and other mechanical equipment.

The Mexican government has allocated $8,000,000 for construction during 1944, but considerable work will remain to be done in 1945 to complete the gap.

Gaps in the highway between this country and the Canal Zone are as follows: 410 miles in southern Mexico, 117 miles in Costa Rica, and 33 miles in northern Panama. The Mexican government is rushing construction work on its part of the international highway. The U. S. Public Roads Administration has entered into contracts to close the gaps in Costa Rica and Panama, although additional funds will be needed.

MEN AT WORK

ALSTON R. ZYRD (Second from left) and JOHN A. GILMONT (third from left) received awards of merit presented by Regional Director CHARLES E. CAREY (right) and Assistant Regional Director R. S. CALLAND of the U. S. Bureau of Reclamation at Sacramento, Calif., for developing a new map coloring process.

JOHN A. O'LEARY, formerly resident engineer for U. S. Engineers on long section of Inter-American Highway in Panama, and for many years with Los Angeles County, is now principal utilities inspector on enlargement of Marine Corps Air Station, El Toro, Calif.

Drainage details of a North Carolina highway project are described by W. S. WINSLOW, hydrographic engineer for the North Carolina State Highway and Public Works Commission.

L. W. DUFFEE, regional engineer for the Federal Works Agency at Atlanta, Ga., has been with that organization since 1935, having been regional engineer since October, 1942. Previous to joining the FWA he was with the Public Works Administration.

Considerable persuasion was needed to get these Detroit Expressway engineers to stop working long enough for a picture. Left to right: R. P. KELLEY, associate engineer, Public Roads Administration; HARRY C. COONS, deputy commissioner and chief engineer and C. H. BROWN, assistant metropolitan engineer, both of the Michigan State Highway Department.

Together these two engineers have served the city of Atlanta, Ga., for more than a century. W. ZOO SMITH (left), general manager of the city's water works since 1910, has been employed by the city for 5[illegible] years, and MEREDITH COLLIER, superintendent of the department's construction and distribution forces, for 48 years.

...o key engineers with Florida State Road Department ...ss briefly in one of Tallahassee's beautiful parks. E. S. ...ASER (left) is bridge engineer, and CHARLES HOP-...NS, who has been with the department 17 yrs., is now ...sion engineer of plans and surveys.

Construction work now in progress to strengthen Saluda Dam and to provide more spillway capacity is inspected by, left to right, J. S. HOLLOWELL, resident engineer on the job for the U. S. Engineers; Lt. Col. JOHN W. PATTON, JR., district army engineer at Charleston, S. C.; and O. B. STEWART, senior engineer in the South Atlantic Division office of the Corps.

C. B. McMILLAN, state highway engi...er in South Carolina, reports that his ...partment has preparation of detailed ...ans well advanced on a postwar road ...ogram nearly double that of a normal ...ar's program.

These three engineers continuing their long service with the city of Augusta, Ga., are: left to right: MARION B. COOPER, superintendent of the canal and waterworks department; ERNEST E. PUND, city engineer and commissioner of public works, and JNO. D. TWIGGS, assistant city engineer.

B. P. McWHORTER, principal highway ...gineer at Richmond, Va., for the Public ...oads Administration, tells the editor of ...ostwar plans for extension of the Shirley ...Memorial Highway in Virginia.

Brig. Gen. James B. Newman, Jr., commanding general of the 9th Engineer Command of the 9th AF, checks over plans with his staff, "dozer devil" aviation engineers who will build advance airdromes on the continent. Left to right, seated: Col. K. B. Schilling of Wilmington, Del.; Brig. Gen. Newman; and Col. H. W. Ehrgott, AGO, Washington, D. C. Standing, l. to r. Col. J. W. Park, Tacoma, Wash., Lt. Col. C. C. Ziegler, St. Mathews, S. C.; Maj. B. J. Ashwell, London, Eng.; Lt. Col. C. S. Kuna, Torrington, Conn.; Lt. Col. S. DiMeo, Philadelphia, Pa.; Lt. Col. J. O. McElheny, Marion, O.; and Lt. Col. G. Kumpe, Fort Omaha, Neb.

News of the engineering schools

William W. Wurster has been appointed dean of the School of Architecture of the Massachusetts Institute of Technology, succeeding Walter R. MacCornack, who has retired. Dean Wurster was graduated from the University of California in 1919, having studied naval architecture and marine engineering. After visiting the Hawaiian Islands and the Philippines, he joined the architectural firm of John Reid, Jr., then engaged in the design of San Francisco school buildings. He later spent three years in Europe. Upon his return he was connected with the firm of Delano & Aldrich, New York City. Latterly Mr. Wurster has done special research on city planning at Harvard University, and served as coordinator of design in the Yale Architectural School for one term.

The Engineering College Research Association has just issued a 77-page directory of member institutions and their principal fields of research.

Professor Robert E. Stiemke, director of the engineering experiment station at North Carolina State College, Raleigh, N. C., has entered the Army as first lieutenant. He will serve as a sanitary engineer for the U. S. Public Health Service. He went to State College in Sept., 1942, to serve as an associate professor of sanitary engineering. He was placed in charge of the experiment station, Sept., 1943.

N. M. Newmark, research professor of civil engineering at the University of Illinois, has been granted a leave of absence for six months to undertake a special overseas assignment as a technical observer and expert consultant to the Army for the Office of Field Service.

Prof. Chilton A. Wright of the Polytechnic Institute of Brooklyn has been granted a leave of absence to join the staff of the Experimental Towing Tank, Stevens Institute of Technology. As assistant to the director, Prof. Kenneth S. M. Davidson, Prof. Wright will be engaged upon various confidential research projects for the Navy's war expansion program.

The University of Florida at Gainesville has announced the appointment of two new faculty members of its College of Engineering. They are S. J. Broderick, Yellow Springs, Ohio, research engineer and a graduate of the University of New Hampshire with degrees from New York University and Loran S. O'Brannon, Columbus, Ohio, research engineer with degrees from the University of Indiana and the University of Louisville.

Sixty-five engineering schools of the United States are working on more than 600 research projects related to war or postwar activities, according to W. R. Woolrich, president of the Engineering College Research Association and dean of the engineering department of the University of Texas.

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Big Inch conversion to natural gas urged

Predicting that the United States will have a surplus of tank ships for the transportation of oil and products in the postwar period, Sidney A. Swensrud, vice president of Standard Oil Co. of Ohio, has recommended that the twenty-four-inch (Big Inch) and twenty-inch (Little Inch) war-emergency pipe lines be converted to bring natural gas from Texas to industrial centers in New York, New Jersey and Pennsylvania.

He pointed out that with plenty of tankers available, it would be difficult for pipe lines to compete, and called attention to the concentration of population in Eastern states.

"Gas marketed through the lines would amount to only 3 to 4 percent of total natural gas consumption in the United States at present, and there would appear to be adequate supplies available for the lines," he said.

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Wage scale investigated in Norfolk-Newport News

Inspectors of the Wage and Hour Division of the U. S. Department of Labor are to check records of a number of construction contractors in the Norfolk-Newport News, Va., area who are believed to be operating in violation of the Wage Stabilization Act.

The check, which is to result from an investigation of wage conditions conducted by a tripartite panel of the Wage Adjustment Board, will also be directed to detect illegal wage increases granted through the subterfuge of misclassifying workers into higher paying classifications.

After receiving reports from the inspectors, the panel will reconvene to take action in accordance with the penalty provision of the wage stabilization laws. Carl Jansen of Pittsburgh, Pa., who is associated with the Dravo Construction Co., is industry representative on the panel.

Wages paid in violation of the Wage Stabilization Act may be disallowed by the government as an expense of the employer in computing his deductible costs for income tax purposes or for reimbursement purposes under government cost-plus contracts, according to WAB.

The stabilized rates were fixed by the Wage Adjustment Board, which has jurisdiction over construction wage rates after a survey had shown an unstabilized condition. Hourly rates for the area are:

Air tool operators (jackhammermen vibrator)	$.65
Laborers	.65
Mason tenders	.80
Plasterers' tenders	.80
Mixers, under ½ cubic yard	.65
Steamfitters' helpers	.75
Terrazzo workers' helpers	.65
Tile setters' helpers	.65
Truck drivers	.70
Truck drivers, transit mix	.75

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Detroit unions cooperate with WLB on wage rates

Though the National War Labor Board has denied a general adjustment in wage rates for unskilled laborers and mortar mixers on construction projects in Wayne, Oakland and Macomb counties, Mich., it has authorized the Wage Adjustment Board to approve applications of individual employers for a ten cent increase in both brackets. This provides a means of checking up on construction contractors by requiring them to indicate whether or not they have paid excess rates in the past, the amounts paid, and the number of employees affected.

The General Builders' Association of Detroit and the Laborers' Union, Local 334, A. F. of L., had requested a 15 cents general increase over the 90 cents paid laborers, and the 95 cents paid mortar mixers. They are now, however, appointing a committee to cooperate with the Detroit Regional War Labor Board to enforce the new rate. This is the first time that industry and labor have set up machinery to effect voluntary enforcement of any wage stabilization program.

England plans to build 2,000 houses a week; has prototype on display

Peak production of prefabricated, temporary, steel houses can be reached three months after start of production. Land now being purchased by public agencies

England expects to be producing from 2,000 to 2,500 pre-fabricated, temporary steel houses a week, within three months after labor, industrial capacity, and manpower can first be spared from the war effort, the Minister of Works, Lord Portal, recently told the House of Lords.

He gave no indication as to when that will be. However, he added that before mass production could begin, seven months would be required from last May to perfect the prototype now set up, and to provide suitable jigs and tools for production on a mass scale.

The prototype, the approval of which Parliament has under consideration, has been on display in London since the first of May. A duplicate house is planned for display in Scotland as soon as it can be built.

Under present plans the houses—which will be manufactured by hundreds of thousands—are to be publicly owned, allocated, and licensed. Though designed to last ten years, they are intended to meet the needs, during the first four or five years after the war, of returning servicemen, and of families whose homes have been bombed.

More than half of the 20,000 acres of land required for erection of the proposed houses has been acquired and, to hasten acquisition, Parliament has authorized the Minister to confirm compulsory purchase orders without a public inquiry. In order to provide manpower and equipment, the Minister of Works is releasing the organization, the specialist labor, and plant of a number of civil engineering contractors, and is making them available for the preparation of housing sites.

In this connection, local authorities have been instructed "to carry out works of site preparation (including the provision of roads and sewers) . . . during 1944." Such works are to be suitable for both temporary and permanent houses.

Designed for a family of four, the prototype consists of a simple, pressed steel unit which requires five tons of sheet steel. It includes a living room of 145 sq. ft., two bedrooms each of 125 sq. ft., a kitchen, bathroom, lavatory, and shed, covering a total area of 616 sq. ft. within the outer walls.

Floor sections are formed of sheet steel joists to which wood flooring is attached with screws.

Walls, in panels of equal widths and containing steel windows, are wedged and bolted, and set on a sheet steel sill at the floor level and between vertical corner and middle posts. Kitchen, bathroom, and lavatory walls are lined with steel; elsewhere, walls are lined with plyboard. Insulation is provided by means of aluminum foil on paper mounted on a light timber frame within the external wall. The inside of the exterior walls and the roof are asbestos-sprayed to deaden sound.

The roof, pitched at 6½ deg., has pressed metal joists at the centers corresponding to the widths of the wall panels. The roof is bonderized, primed, tarred and sanded, as protection against rust. The steel walls are bonderized, primed and painted.

Much experimentation has gone into plans for interior fixtures and fittings. Water will be heated from a boiler behind the living room stove connected with the cistern. When there is no fire in the stove, an electric immersion heater will be used.

As to cost of the temporary structures, Lord Portal announced a tentative figure of $2,200 per house—manufactured, delivered, and erected, with necessary facilities for water, drainage, gas and electricity. This is exclusive of land cost which, during the period between wars was estimated at from $80 to $100 a house. Of the $2,200 total house cost, $400 is charged to fittings, and $220 is estimated as the cost of clearing sites.

The cost of the usual type of building materials, the minister said, reflect the following increases since the beginning of the war: bricks 45 percent, timber 160 percent, and cement 44 percent. It is believed, however, that these prices will decrease with the increase in production after the war.

The prototype was designed by C. J. Mole, deputy director of works; and A. W. Kenyon, in cooperation with Dr. R. E. S. Radling, chief scientific advisor to the Ministry of Works.

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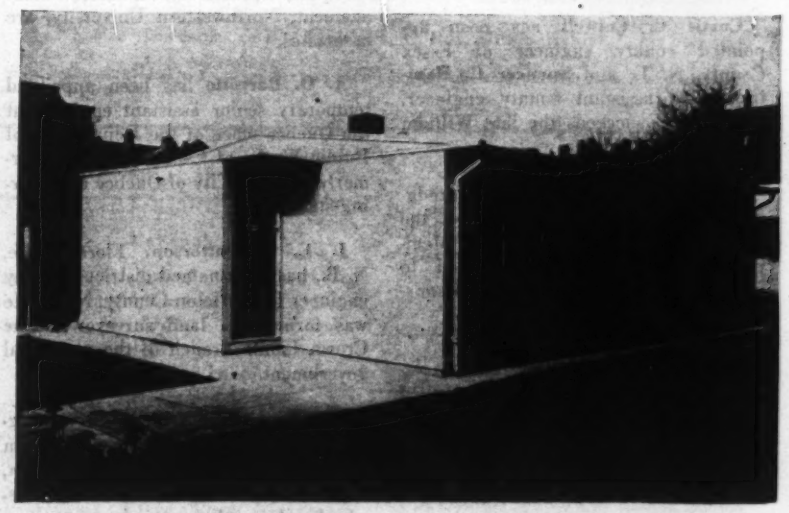
Access maintenance limited in Indiana

Maintenance of defense plant and military access roads which are not a part of the state highway system will not be the responsibility of the Indiana State Highway Commission, according to S. C. Hadden, commission chairman.

In advising the officials of cities, towns and counties where such projects have been constructed, the commission pointed out that while the State Highway Department constructed the roads and bridges, it was only as construction agents for the Federal Government.



First of 500,000 British prefabricated houses

This little house has a living room, two bedrooms, a kitchen, bathroom and a shed. It is made almost entirely of steel, and careful insulation (aluminum foil between inner and outer lining) gives protection against noise and changes of temperature. Much built-in furniture is used in this "prototype" house now before Parliament for approval.

MEN AND JOBS

Owing to a large expansion of business within recent months, the firm of Gannett Fleming Corddry and Carpenter, Inc., have added a number of men to their staff. Among them is **Allston Dana,** who will take care of bridge design. Mr. Dana, was formerly chief designing engineer of the George Washington and of the Triborough bridges under the Port of New York Authority. He has recently returned from a year in North Africa where he was in charge of construction of equipment repair shops, etc. for the British Government.

John R. Dietz has also joined the organization to handle highway design. He is a former employee of the Pennsylvania Highway Department and of the Pennsylvania Turnpike Commission, and was with Caribbean Engineers on runway design and also on runway design for Gannett, Eastman & Fleming, Inc. on the Camp Springs, Md., airport.

Lieut. Col. Harold A. Buck, of Enka, N. C., former superintendent of construction for the American Enka Corp., has been named chief of staff to Brig. Gen. George L. Van Deusen, commanding general of the Eastern Signal Corps Training Center at Fort Monmouth, N. J. He formerly was plans and training officer of the Eastern Signal Corps Schools, and has been at Fort Monmouth since December 1941. He was graduated from the Northwestern University School of Engineering in 1925.

Curtis C. Colwell has been appointed county engineer of Essex County, N. J., and **Spencer C. Hamilton, Jr.,** assistant county engineer. Mr. Colwell succeeds the late William A. Stickel.

Austin B. Smith, head of the dredging and navigation section of the Mississippi River Commission at Memphis, Tenn., has been promoted to major. He has been with the commission since 1935.

Capt. A. L. Anderson, public relations and field officer of the United States Engineers, Little Rock, Ark., has been promoted to major. He was formerly a construction engineer at the Maumelle Ordnance Plant.

George W. Naill, construction engineer, has been made manager of the Ebasco International Corp., a subsidiary of the American and Foreign Power Co. at Sao Paulo, Brazil. Naill has completed five years work on the Alcoa Dam, near Knoxville, Tenn.

Lt. (jg) Hoyle Scott, USNR, of Durham, N. C., has been assigned as an engineer with the Bureau of Ships, Washington, D. C., after tours of duty at Bowdoin College, Brunswick, Me., and the Massachusetts Institute of Technology. As a civilian, he was an engineer with the Public Buildings Administration.

Claude H. Helms, for 12 years town manager of Tryon, N. C., has resigned to become town manager of Morganton, N. C.

Lieut. Col. Lynn W. Pine, formerly executive officer for the Panama Engineer Division and the First Airborne Engineer Aviation Unit Training Center, has recently become commanding officer of the latter organization, of which **Lieut. Col. Val Price** is now executive officer.

Crowley, Stapleton & Associates, Inc., consultants in management, production, research and engineering development, has been established at 407 S. Dearborn St., Chicago, Ill. The staff includes **Clyde A. Crowley,** consulting engineer; **Royal L. Stapleton,** management engineering consultant; and **Joseph C. Fasulo,** industrial engineer. **Henry L. Bowlby,** past president of the American Road Builders Association, and **Chester E. Willard,** professor of industrial management, Northwestern University, are associates.

A. O. Barrette has been appointed temporary senior assistant engineer at the Quebec office of the Department of Public Works of Canada. He was formerly with the City of Quebec engineering staff.

J. E. J. Patterson, Florenceville, N. B., has been named district highway engineer for Carleton County, N. B. He was formerly a land surveyor in the Crown Lands Branch of the provincial government.

Col. Fred G. Sherrill has been designated chief of the Procurement Division of the Chief of Engineers, Washington, D. C., in place of **Col. G. K. Withers,** who has been given an overseas assignment.

For his part in planning base and highway installations and operation of the Alaskan Highway, **Col. Kenneth B. Bush,** C.S.C., former Chief of Staff of the Northwest Service Command, on May 5 was presented with the Legion of Merit Award in the office of the Adjutant General, Washington, D. C.

Drue L. Murrell, formerly construction superintendent for L. H. Lacy Construction Co. and the Uvalde Construction Co. of Dallas, Tex., has been made a lieutenant-commander with the Seabees abroad.

R. W. McColough, of Halifax, N. S., has resigned as deputy minister of public works and highways of Nova Scotia to become general manager of the Dufferin Construction Co., Toronto, Ont.

Capt. Clyde R. Harvill, former city sanitary engineer of Houston, Tex., has been made sanitary engineer of a U. S. replacement depot in England.

Donald H. Selvedge has resigned as resident highway engineer in Amherst and Nelson counties, Va., to go with an industrial plant at Lynchburg. He is succeeded by **S. D. Crute,** of Shenandoah.

Porter William Gifford, former construction engineer of the Gifford-Hill Co. of Dallas, Tex., has been promoted to major with the U. S. Air Service Command.

William C. Parrish, who received his civil engineering degree in 1929 from North Carolina State College, is a major in the Army at Nashville, Tenn.

The Memphis, Tenn., and Shelby County Public Utilities Research Bureau, organized recently, has engaged two additional engineers: **Hugh Phillips,** a graduate of Lehigh University, formerly associated with the Phillips Engineering Co., of New Jersey, to be chief engineer, and, to be assistant engineer, **Geoffrey Mercer,** a former associate of Mr. Phillips.

John P. Powers, formerly with the Associated Architects, Little Rock, Ark., recently became city engineer, succeeding R. A. Boyce, who resigned to go with the Arkansas state highway department.

Daniel M. Furr, superintendent of streets at Ashville, N. C., since 1935, is now with the Asheville Paving Co. His successor, **John H. Stevens,** recently has been with the TVA at Fontana and Bryson City, N. C., and prior to that was a building contractor. He also served for four years as project supervisor for the WPA, and for three years was construction foreman, U. S. Forest Service.

State and local postwar plans surveyed by FWA

The Federal Works Administration is king a survey of the postwar plans state and local government agencies construction of public works. Though public announcement has been made the undertaking, it is understood m a reliable source that the survey being made by the Bureau of the dget at the request of Maj. Gen. ilip B. Fleming, FWA administrator, ce the former is equipped to carry on ch work. Congressman Colmer of sissippi, chairman of the House stwar Planning Committee, asked eral Fleming to have the survey de, as a guide to the House Public orks Committee.

The information being collected by bureau will include volume and sent status of plans.

In line with the great amount of timony which has been given before se and other committees and on the or of both houses, Congress appears be trying to avoid a repetition, after s war, of a WPA type of work relief. hile the general attitude is that public rks can provide a large amount of ployment, these should be works nned locally and should meet the eds of both public works and em- yment.

The aim of the questionnaire is not encourage local governments to be- ve that a lot of money is to be fur- shed them for any projects they can ink up, but rather to find out the ount of work actually planned for its n value. This information will then translated into man-hours needs and ill also give to Congress an idea of the ount of money that could be taken up r public works construction in the rious communities.

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Lima highway congress postponed to Oct. 12—22

The fifth Pan American Highway ngress which was to have been held Lima, Peru, July 5-24, has been post- ned until October 12-22. The change s announced by the State Depart- nt's Division of International Con- rences following word from the Peru- n ambassador that insufficient time d been allowed for the preparation of chnical papers.

Francisco Valdez, director of high- ys and railroads in the Ministry of blic Works, Washington, heads the ganizing committee for the congress. an Quiroga, chief of the Peruvian chnical highway service, is committee cretary.

JOBS OF THE WEEK

CRACKING PLANT, Torrance, Calif.

M. W. Kellog Co., Gardena, will design and construct a stoker unit for a twin-unit cracking plant, refinery buildings and equipment for General Petroleum Corp., Torrance. The estimated cost is $5,000,000.

PERSONNEL BUILDING, Alameda, Calif.

Bureau of Yards & Docks, Navy Department, Washington, D. C., awarded a contract for the construction of additional personnel buildings, at Naval Air Station at $1,261,865.

FILTER AND ADMINISTRATION BUILDINGS, Chicago, Ill.

City of Chicago received the lowest bid on superstructures of filter and administration buildings, South District Filtration Plant, from S. N. Nielsen Co., Chicago, at $1,689,700, including heating, plumbing and piping. W. W. DeBerard is the city engineer.

HYDRAULIC FILL AT AIRPORT, Idlewild, N. Y.

Atlantic Gulf & Pacific Co., New York, N. Y., were the lowest bidders on 8,500,000 cu. yd. hydraulic fill when the Department of Marine & Aviation, New York City, opened bids. Price bid was $1,341,950.

SUPERSTRUCTURE FOR POST OFFICE, Long Island City, N. Y.

John A. Johnson & Sons, Brooklyn, N. Y., has been awarded the contract for constructing the superstructure for postal concentration center by U. S. Engineers, New York, N. Y., at $2,335,916. Alfred Hopkins & Associates, New York, N. Y., are the architects. Work is well under way.

AIRPORT CONSTRUCTION, Waterloo, Ia.

Civil Aeronautics Administration, Kansas City, Mo., awarded a contract for surfacing runways, and airport improvements to Concrete Materials & Construction Co., Cedar Rapids, Ia., at $1,178,019. P. E. Herner, Kansas City is the consulting engineer.

GASOLINE and CYCLING PLANT, Haynesville, La.

Ohio Oil Co., Midstates Oil Corp. and Gulf Refining Co. and Associates, Shreveport, La., awarded a contract for the design and construction of a gasoline and cycling plant to Jones & Laughlin Supply Co., Tulsa, Okla. The estimated cost is $1,750,000.

HOSPITAL, Halifax, N. S.

Brookfield Construction Co., Ltd., Halifax, N. S., has been awarded a contract for a 15-story building for Victoria General Hospital by the Province of Nova Scotia. The estimated cost $1,500,000. C. H. J. Wilson, Halifax, is the architect.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 13.

MEETINGS

National

NATIONAL RIVERS AND HARBORS CONGRESS, special session, Roosevelt Hotel, New Orleans, La., July 27-28.

Regional and Local

NORTH CAROLINA LEAGUE OF MUNICIPALITIES, annual meeting, Robert E. Lee Hotel, Winston-Salem, N. C., Aug. 23-25.

PENNSYLVANIA WATER WORK OPERATORS' ASSOCIATION, eastern Pennsylvania section, Columbia, Pa., August 28-29.

NORTHERN MICHICAN COUNTY ROAD COMMISSIONERS' ASSOCIATION, annual meeting, Cadillac, Mich., Sept. 7-8.

NORTH DAKOTA WATER AND SEWAGE WORKS CONFERENCE, 16th annual convention, City Auditorium and World War Memorial Building, Bismarck, N. D., Sept. 12-13; jointly with the North Dakota League of Municipalities.

AMERICAN WATER WORKS ASSOCIATION, WESTERN PENNSYLVANIA SECTION, AND WESTERN PENNSYLVANIA WATER WORKS OPERATORS ASSOCIATION, joint wartime conference, Roosevelt Hotel, Pittsburgh, Pa., Sept. 13-14.

SOUTH DAKOTA WATER AND SEWAGE WORKS CONFERENCE, annual meeting, Lincoln Hotel, Watertown, S. D., Sept. 19-20.

NEW ENGLAND WATER WORKS ASSOCIATION, annual meeting, Poland Spring House, Poland Spring, Maine, Sept. 19-22.

OBITUARY

John S. Ward, 84, oldest employe in the Texas Highway Department, died recently. He had filled several offices in the municipal government of Austin before joining the highway department staff twenty years ago.

Samuel Hamilton Hedges, 78, president of the Puget Sound Bridge & Dredge Co., died June 28 in Seattle, Wash. Mr. Hedges was born in Ira, N. Y., and was graduated from Iowa State College where he obtained a master's degree in civil engineering.

Edgar Ames, 76, shipbuilder, died June 28 in Seattle, Wash. Mr. Ames was largely responsible for the dredging of Elliott Bay. During World War I, the Ames Shipbuilding & Dry Dock Co., which Mr. Ames headed, constructed steel steamships. Mr. Ames was born in St. Louis, Mo., and was a graduate of Yale University.

George B. Carroll, 79, veteran civil engineer and building contractor of Colfax, Ia., died recently in that city.

Oliver J. Schieber, 55, for 30 years a civil engineer with the Southern California Edison Co., died June 23 at Los Angeles. He was division superintendent of the Los Angeles Metropolitan Water District for seven years.

Willis E. Cary, for the past 40 years superintendent of the city bureau of sewers, died in Worcester, Mass., on July 7.

Charles Dorman Evans, 65, civil engineer for the Federal Works Administration at Fort Worth, Tex., died June 30.

Alarik W. Quist, 60, who was born in Sweden, died at Seattle, Wash., July 15. He was an expert on underwater cement construction. He built the piers at Pearl Harbor in 1934 and 1935, working with the Hawaiian Bridge and Dredging Co. During the first World War he contracted to do all cement work for the Navy at the Puget Sound Navy Yard.

The first work of his company, in 1906, was the construction of the first government relief stations at Point Barrow, Alaska. He later built the Baranof Hotel at Juneau.

Indiana building codes ready for postwar work

The path for postwar construction in Indiana is said to have been cleared, as far as building codes are concerned, by the Governor's recent formal approval of general construction and electrical rules and regulations. This follows closely the promulgation of rules governing plumbing, heating, ventilating and air conditioning.

The Administrative Building Council of Indiana, created by a legislative act of 1923, is responsible for the revision and adoption of the new building codes which supersede codes that have been in use for many years and which by reason of progress in engineering and materials have become inadequate and obsolete. The building rules and regulations, as well as the electrical code, had not been revised since 1928; the plumbing code, since 1936. No statewide code for heating, ventilating and air conditioning had ever been adopted.

The new general construction code is patterned after the Uniform Code of the Pacific Coast Building Officials Conference which is now in use in more than 350 cities located in 31 states, and in Hawaii and Canada. It is the result of more than six years' work by many interested organizations, having been started in March, 1938, under the direction of a committee on building code revisions set up by the Indiana Society of Architects.

The law specifically states that the rules and regulations adopted and promulgated by the council shall have the force and effect of law in the design, construction, repair or alteration of public buildings, and, since Indiana cities adopt the state code for their minimum standard of practice, the new codes by eliminating conflicting and obsolete regulations are expected to insure better and cheaper building construction with greater protection of life, health and safety. The further adoption of these codes by local communities in the state is being promoted by the council.

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Let large war housing contract in Baltimore

The contract for a very large public housing project in Baltimore, Md.,—the 600-unit Cherry Hill development for Negro war workers—was let recently to the Ross Construction Co. of Washington, for approximately $3,088,339.28.

Representatives of the Federal Public Housing Authority and the Housing Authority of Baltimore, which is to supervise erection of the structures and manage the project, closed the contra

Work is scheduled to get under w promptly on the units, which are to of permanent construction in contr to some 1,000 temporary units be built on three separate sites in t eastern section of the city and met politan area for Negro war worker

The project site totals nearly acres, of which streets will take more than ten acres. There will approximately ten dwelling units acre.

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WPB eases restrictions on sewerage facilities

The War Production Board has j amended the Preference Rating Or P-141, governing maintenance, rep and operating supplies of public sa tary sewerage facilities, by permitti above-ground additions up to $1,5 by removing certain special restricti on the use of aluminum and by inco ing the $1,000 exception to the restriction to $5,000.

Operators of public sanitary sewer systems may now, without authorizati from the board, construct additions expansions wherein the cost of mat als does not exceed $1,500. Prior this amendment, above ground c struction was limited to a material c of $500. The $1,500 material limit underground construction is unchang

WEEKLY CONSTRUCTIO SUMMARY

CONTRACTS

Continental U. S. Only
(Thousands of Dollars)

	Week Ending July 22 1943	July 13 1944	July 19
Federal	$36,917	$44,531	$16,1
State & Municipal	6,997	8,966	8,0
Total public	$43,914	$53,497	$24,1
Total private	5,055	9,013	11,9
TOTAL	$48,969	$62,510	$36,0
Cumulative 1944	(29 weeks)		$1,009,2
Cumulative 1943	(29 weeks)		$2,021,2

Note: Minimum size projects includ are: Waterworks and waterways projec $15,000; other public works, $25,000; dustrial buildings, $40,000; other bu ings, $150,000.

NEW PRODUCTIVE CAPITAL

	1943 29 Weeks	Cumulative 19 29 We
NON-FEDERAL	$266,396	$290,0
Corp. Securities	15,321	85,9
State & Mun	90,942	64,7
RFC Loans	9,000	56,6
FPHA Loans	3,133	
REA Loans	20,000	20,0
Fed.-Aid Hwy	128,000	63,0
FEDERAL	$2,653,838	$473,5
TOTAL CAPITAL	$2,920,234	$765,5

ENR INDEX NUMBERS

Index base=100		1913	19
Construction Cost	July '44	299.94	144
Building Cost	July '44	235.55	127
Volume	June '44	91.	40

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager — *SCOTT McLEOD, Statistics* — *J. A. MAHONEY, Reports*

(Daily service also available—Write for details)

WATER SUPPLY

PROPOSED WORK

Calif., Glendale—City, 1,800,000 gal. concrete reservoir. $70,000. J. C. Albers, city engr.

Colo., Ridge—State Home for Feeble Minded, Ridge, water supply sys. $30,000.

Conn., Middletown—City, S. C. Cannon, Dpt. P. Wks., making surveys water supply and potential expansion. Metcalf & Eddy, 1200 Statler Bldg., Boston, Mass., engrs.

Ill., Chicago—City, Dpt. P. Wks., City Hall, water pipe main connecting station at Springfield Station and Wabansia and Ariem. $475,000.

Ill., Galesburg—City, repairing, replacing watermains, valves, etc. $25,000. A. O. Nordhielm, city engr.

†**Mich., Muskegon**—City, 25,400 ft. 10- to 24-in. watermains, valves, fittings, appurtenances, Mich 30-357-P. $246,500. **FWA.**

O., Dover—Town, 2 wells and pumping equip. at light plant. $25,000—$40,000.

O., Salem—City, preparing estimates of 1 mg. underground reservoir. $50,000.

Okla., Norman—City, R. M. McCool, mgr., Norman, water imprvs. $75,000. Applied for WPA funds. V. V. Long & Co., 1300 Colcord Bldg., Oklahoma City, Zone 2, engrs. CD 6/6/43—ENR 6/24/43.

S. C., Florence—City, new well, deep well pump, controls and moving present pump house, S.C. 33-249-N. $33,500. **FWA.**

S. D., Tripp—Voted $30,000 bonds, WW sprvs.

Tex., Cuero—City, 50,000 gal. concrete water reservoir. Over $15,000. **FWA** gr.

Tex., Galveston—$1,200,000 bond election about July 29, 30 in. watermain between La Loma and Galveston mainland. C. C. Washington, Courthouse, consult. engr. CD 7/1—ENR 7/6.

BIDS ASKED

Bids Asked July 24

Pa., Phila.—Bureau of Water, Chestnut St. Pier, Delaware Ave. and Chestnut St., electric power and control sys. for 40 MGD pump unit in South Engine House, Lardner's Point Pump. Station. Plans deposit $5.

Bids Asked July 25

N. Y., New York—Comm. Water Supply, Gas & Electricity, Municipal Bldg., hauling, laying watermains, appurtenances in Gun Hill Rd., Reservoir Oval, Mosholu Pkwy., Concerns, Halsey, and E. 225 Sts.

Bids Asked July 26

N. M., Fort Stanton—U. S. Eng., 550 Post Office Bldg., Dallas, Tex., repairs, imprvs, expansion, etc. water reservoir (U. S. Marine Hospital).

Pa., Aliquippa—Boro, E. W. Devitt, secy., Municipal Bldg., water wells, Crow Island, Ohio River, in West Aliquippa, steel tubing, 4,000 gal. per day alternate bids for 6 cassia casing wells or 3 gravel walled wells, incl. 700 ft. 6 and 10 in. c.i. mains. $20,000. Morris Knowles, 1312 Park Bldg., Pittsburgh, engr. CD 12/13—ENR 12/16.

Bids Asked July 31

Ga., Hagansville—City, pump. station addn., water filtration plant. Wiedeman & Singleton, Candler Bldg., Atlanta, engrs.

Bids Asked August 2

N. J., Chatham—Borough of Chatham, C. Yeager, clk., Borough Hall, large diam. gravel filter well, approx. 150 ft. deep in vicinity of existing well field. Plans deposit $5 Clyde Potts, 30 Church St., New York, N. Y., consult. engr.; adv. ENR 7/20.

LOW BIDDERS

Calif., San Francisco—Dpt. P. Wks., City Hall, replacement cold and hot water piping sys. for main group bldgs., at San Francisco Hospital, Potrero Ave., from Herman Lawson St., 446 Tehama St.. $138,947.

Calif., San Francisco—Pub. Utilities Comn., City Hall, replacement Bald Hill outlet shaft and adits near north end of San Andreas Lake, San Mateo Co., Water Dpt. Contr. 368, from T. E. Connolly, 461 Market St., $113,-

Ill., Chicago—City, City Hall, July 10, superstructures of filter and administration bldgs. of South District Filtration Plant, Lake Front, east of South Shore Dr. and north of E. 79 St., from S. N. Nielsen Co., 3059 W. Augusta St., $1,689,700. CD 6/14 ENR 6/22.

Location of ENR Correspondents

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily
A-E-M Architect-Engineer-Management type of contract

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Unclassified
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads);
BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);
LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.
CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.
Dates shown are of issue in which last previous report was published.

Ill., Maywood—Village, water pipeline connecting Melrose Park main at 9 Ave. and Iowa St. with Maywood Pump. Sta. at 9 and St. Charles Rd., from Felix Orfei, 1313 N. 20 St., $130,913.

Pa., Union City—Boro of Union City, P. A. Cooper, secy., Boro Hall, watermains, appurtenances, incl. valves, from Keystone Constr. Co., 131 Mead St., Meadville, $26,192. C. C. Cheney, Chautauqua, N. Y., engr.

CONTRACTS AWARDED

†**Ariz., Kingman**—U. S. Eng., 751 S. Figueroa St., Los Angeles, 14, Calif., exten. Hackberry WW sys., to Macco-Robertson Co., 815 Paramount Blvd., Clearwater, Calif. $28,050.

†**Calif., Fontana**—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, furnishing, erecting elevated steel water tank, at Kaiser Steel Plant, to Pittsburgh-Des Moines Steel Co., Rialto Bldg., San Francisco, $16,256.

†**Nebr., Fort Crook**—U. S. Eng., 1709 Jackson St., Omaha, water treatment plant addns., to Peter Kiewit Sons Co., Omaha Natl. Bank Bldg., Omaha, $123,000.

†**N. C., Wilmington**—City, 4 m.g. rein.-con. reservoir, N. C. 31-119, to Norfolk Contg. Co., 1530 Bainbridge Blvd., Norfolk, Va., $167,000. **FWA.** Bids 7/12. CD 6/23—ENR 6/29.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Calif., Los Angeles—Bd. Supervs. Los Angeles Co., Hall of Records, 54,360 ft. 6- to 10-in. sanitary sewer, Northside Drive, C.I. 1089. Over $25,000. A. Jones, Hall of Records, engr.

Colo., Fort Collins—Colorado State College, Fort Collins, drainage and sewerage project on campus. $27,000.

Ill., Galesburg—Made plans reconstructing sewers. $100,000. A. O. Nordhielm, city engr.

†**Ill., Herrin**—City, 52,700 ft. 8-to 24-in. sewers, incl. laterals, interceptors and outfall sewer, manholes, Ill-11-311-N. $155,000. **FWA.**

Mo., Clayton (St. Louis P. O.)—St. Louis Co., c/o residing Judge Luman F. Matthews, Court House, Clayton, St. Louis, Zone 5, storm water sewerage sys. in area adjoining Jefferson Barracks and Missouri Shipbuilding Co. plant, Lemay Twp. Over $237,500. Applied for FWA grant.

†**Nev., Pioche**—City, c/o City Clk., sanitary sewerage sys., disposal unit, $77,000. **FWA.**

N. J., Cedar Grove—Twp. Comn., Cedar Grove, making plans sewerage sys. disposal plant. Havens & Emerson, 233 Bway., New York, N. Y., engr.

Pa., New Castle—City, C. E. Brown, clk., City Hall, revising plans outfall sewer, 3,300 ft. 48 in. and 130 ft. 36 in. rein.-con. pipe, chlorination bldg., equip. $125,000. Havens & Emerson, 1140 Leader Bldg., Cleveland, O., engrs. CD 12/1—ENR 12/9.

S. D., Tripp—Voted $30,000 bonds, sewerage sys.

★**Tex., Houston**—City, 18 to 54-in. storm sewers E. 23 St., $135,000; 24 to 84-in. storm sewer 3 sections Kirby Dr., $290,000; 36 and 60 in. storm sewer Shepherd Dr., $130,500. F. Harrell, asst. city engr.

Tex., Houston—City, 36- to 90-in. storm sewers in Ingram Gully. $164,000. F. Harrell, asst. city engr.

†**Utah, Orem City**—Orem City Corp. 64,200 ft. 4-to 15-in. sewer, 137 manholes, septic tank, appurtenances; also imprv. present WW sys., Utah 42-185-N. $243,000. **FWA.**

BIDS ASKED

Bids Asked July 25

Mich., Detroit—Dpt. P. Wks., City Hall, rein.-con. sewage regulating chamber, connections, Contr. PW-25. Approx. $25,000. Geo. R. Thompson, city engr.

Bids Asked August 1

★†**Va., Newport News**—Federal Works Agency, 601 State-Planters Bank Bldg., Richmond, Zone 19, 3.75 mi. intercepting sewer, pump. station and connecting sewers here, and portion of Elizabeth City Co., Va. 44-358, for Hampton Roads Sanitation Dist. Comn., Norfolk. Plans deposit $5. Greeley & Hansen, Adams Bldg., Norfolk, consult. engrs. CD 4/19—ENR 4/27.

LOW BIDDERS

†**Calif., LaMesa**—City Clerk, City Hall, July 10, sanitary sewers between here and San Diego, Calif. 4-148, from J. S. Barrett, 455 Spreckles Bldg., San Diego. $126,877. FWA. CD 6/26—ENR 6/29.

Calif., Los Angeles—City, July 12, sanitary sewer in Centinela Ave., Michell Ave. Sewer Dist., from George Miller, 2147 W. Silver Lake Dr., Los Angeles, $106,220. CD 6/21—ENR 6/29.

N. Y., Kings Park—Dpt. Mental Hygiene, State Office Bldg., Albany, July 12, sewage disposal facilities addn., from H. Gordon Fischer, 60 E. 42 St., New York, Zone 17, $37,000. CD 6/19—ENR 6/22.

Pa., Indiana—Boro of Indiana, J. R. Moorhead, secy., Municipal Bldg., approx. 7,500 ft. 18- to 24-in. sanitary sewer, 24 manholes, from The Pavia Co., Vernona Rd., Verona, $38,000. Q. B. Jones, Municipal Bldg., engr.

CONTRACTS AWARDED

Mich., Grosse Point Woods (Br. Detroit)—City, 2,600 ft. storm water sewer, to Gargaro Co., Inc., 40 E. Seven Mile Rd., Detroit, $63,149.

†**O., Cincinnati**—U. S. Eng., 512 U. S. Post Office and Courthouse, 980 ft. 78 in. c.i. sewers, manholes, to Foley Constr. Co., Wyoming and New St., Lockland, $63,833. Awarded 7/3.

Pa., Pittsburgh—City, Dpt. Pub. Wks., City County Bldg., 8 in., terra cotta and rein.-con. relief sewer Heth's Run near Highland

SEWERS, etc. (Contracts Awarded, Cont'd.)

Park, to Frank Manella Constr. Co., 6908 Chaucer St., $92,750. CD 7/5.

†S. C., Summerville—Town, sanitary sewage collecting sys., disposal plant, S. C. 38-152 NF, Sect. 1, to Skinner & Ruddock, 155 E. Bay St., Charleston, $147,411; Sect. 2, to J. W. Barnwell, Jr., 2206 Terrace Way, Columbia, $55,676. FWA. Bids 7/12. CD 6/27—ENR 6/29.

Wis., West Milwaukee (mail Milwaukee)—Harnischfeger Corp., 4400 W. National Ave., Zone 4, storm sewerage sys. in plant, to M. Wogikoski, 2934 S. 55 St., Milwaukee, Zone 14. Est. $45,000. Steinhagen & Steinhagen, 3735 W. State St., Milwaukee, Zone 3, engrs.

BRIDGES

PROPOSED WORK

Ont., Fort Erie—Municipality, c/o W. C. Tait, clk., bridge between Lewis and Courtwright Sts. $100,000.

BIDS ASKED

Bids Asked August 3

California—State Div. Hys., Sacramento, repairing northerly trestle and truss spans of existing bridge across Santa Clara River at Saticoy VII-VEN-9-A, Ventura Co.; concrete repairing Ridge Route, about 1 mi. northerly of Frenchman's Flat V111-LA-4-1, concrete lined channel, Los Angeles Co. G. T. McCoy, state hy. engr.

LOW BIDDERS

Indiana—State Hy. Dpt., Indianapolis, July 11, scraping, cleaning, painting 31 bridges, Sundry State Hy. Dists., from Busch & Latta Painting Co., 4366 Finney St., St. Louis, Mo., $63,975. Est. $100,954. R. Bower, eh. engr. CD 6/27—ENR 6/29.

Missouri—State Hy. Dpt., Jefferson, July 7, three 45 ft. rein.-con. deck girders, Buchanan Co., from Buchanan Constr. Co., St. Joseph, $40,870; one 40 ft. rein.-con. spandrel filled arch and two 63 ft. concrete frames, both St. Louis Co., from Israel Bros., Clayton, $31,454 and $74,126 respectively. CD 6/27—ENR 6/29.

O., Canton—City, July 6, bridge over East Creek, at 19 St. N.E., from Harry H. Wise Co., 1136 11 St. N.W., $51,341. Est. $44,789.

CONTRACTS AWARDED

Quebec—Province of Quebec, Quebec City, bridge over Bourlarmaque River, Val d' Or, to General Enterprises Society Ltd., Amos, $32,000. Est. $30,000. Dpt. P. Wks., Quebec City, engrs.

STREETS AND ROADS

PROPOSED WORK

Puerto Rico—Insular Dpt. of Interior, San Juan, plans constructing 4.44 kms. Florida-Utuado Rd., in Florida-Utuado, $100,000; constructing and reconstructing LaJagua and Antigua Via Rds., in Caguas, $75,700; completing retaining walls and imprv. Rio Grande River Channel, in Jayuya, $60,000.

BIDS ASKED

Bids Asked July 25

Iowa—State Hy. Comn., Ames, 0.19 mi. grading, etc. U. S. 67 south Bellevue in Sect. 19, Bellevue Twp., FN-419-H; Jackson Co.; maintenance resurfacing 3.8 mi. Iowa 133 from Mt. Pleasant to Oakland, M-5268, Henry Co. 9.1 mi. Iowa 16 from NW corner Sect. 18-69-5 to Denmark, 6 mi. Iowa 103 from West Point to U.S. 218, M-5269, Lee Co.; 20.7 mi. Iowa 14 from Lucas Co. to Knoxville and from Red Rock to Monroe 1.8 mi. Iowa 210 from Harvey to Iowa 92, 1.1 mi. Iowa 365 from Tracy to Iowa 92 M-5271, Marion Co.; 8.9 mi. Iowa 76 from Nichols to West Liberty, M-5272, Muscatine Co.; 13 mi. Iowa 16 from Iowa 98 to Iowa 269 2.8 mi. Iowa 269 from Stockport to Iowa 16, 1 mi. Iowa 98 from Douds to Iowa 16, M-5273, Van Buren Co.; 10.1 mi. Iowa 1 from Washington to Brighton, 8.8 mi. Iowa 81 from Wellman to Iowa 92, 6.4 mi. Iowa 22 Lone Tree to U.S. 218, M-5274, Washington Co.; maintenance excav. 3.5 mi. west of Guthrie Center on Iowa 44, M-4304, Guthrie Co.; maintenance bituminous surfacing on Iowa 175 from Iowa 69 to U.S. 69 in Hamilton Co. and on Iowa 9 from south of Little Rock to west end pavement Iowa 9 in Osceola Co., State M8-6; maintenance culvert repair 4.37 mi. Iowa 8 from east Tama-Benton Co. line M-6201, Benton Co.; on U.S. 6 about 5 mi. east of Kellogg, M-1291, Jasper Co. F. R. White Ames, eh. engr.

Maryland—Engineer State Roads Comn., Baltimore, stabilizing 3.13 mi. Solomons Island Rd. from 10 mi. south Prince Frederick towards Solomond Island, Calvert Co. Plans deposit $5.

Pennsylvania—State Dpt. Hys., Harrisburg, rein.-con. paving 0.26 mi. U.S. Route 611, between Jenkintown and Philadelphia, in Cheltenham Twp.; 0.29 mi. Schuylkill River Bridge surface replacement and approaches thereto, U.S. Route 202, East Norriton Twp., both Montgomery Co.; crushed aggregate base widening 7.73 mi. U.S. Route 119 between Point Marion Borough and Smithfield Borough in Nicholson, Springfield and Georges Twps., Fayette Co.; bituminous on native stone or crushed aggregate surfacing 9.82 mi. Rural Route 32111, incl. 3 cement rubble masonry arches from east of Loop and Mahoning Creek reservoir area, West Mahoning Twp., Indiana Co.

Bids Asked July 26

Louisiana—State Dpt. Hys., Baton Rouge, shaping roadway, gravel surfacing, draining, etc. 173.6 mi. S.P. 737-00-04 (Contr. 2). Sabine Parish; 168.9 mi. S.P. 737-00-05 (Contr. 1). Vernon Parish.

Mo., Clayton (St. Louis, P. O.)—St. Louis Co., W. R. Miller, clk., Court House, Clayton, St. Louis, Zone 5, bituminous macadam on waterbound macadam surfacing, pipe culverts, etc., on Clayton Rd. from Woods Mill Rd., westward 900 ft.; bituminous surface treating, bituminous seal coating Holdon Ave., Eatherton, Ossenfort and Reinke Rds. R. Jablonsky, co. hy. engr.

Bids Asked July 28

Minnesota—State Hy. Dpt., Willmar, production of mineral aggregate for traffic bound wearing course and for stockpiles for Maintenance Div., crush, screen, load and haul about 39,900 cu. yd. gravel, over $30,000; production mineral aggregate for gravel surfacing for Maintenance Div. 9, crush, screen, load and haul about 10,941 cu. yd., $15,000. O. L. Kipp, St. Paul, eh. engr.

Bids Asked August 1

La., Pineville—Town at office R. C. Lawrence, mayor, Town Hall, 6 in. concrete paving 735 sq. yd. College Dr. from Prairie to O'Neal Sts.; 3130 sq. yd. O'Neal St. from College Dr. to Donahue Rd.; 375 sq. yd. bituminous surface treatment over gravel base, concrete curbs, gutters Aubrie St. from L. & A. R. R. to Hill St.; 370 sq. yd. Berry St. from Hill to Valley Sts.; 1320 lin. ft. concrete curb and gutter, etc. Valley St. from Main to Berry Sts. Pan American Eng., 913 Fifth St., Alexandria, engr.

Bids Asked August 5

Ala., Birmingham—Comrs. Jefferson Co., liquid resealing 1 mi. Dolomite-Wylam Rd.; 3 mi. Rutledge Springs-Wilkes Rd. and Fairfield Highlands-Brighton Rd., 7 mi. Jefferson Ave. from city limits of Powderly to Brighton and section from Jefferson Ave. near Belcher Lumber Co. northerly to city limits; 3 mi. Dug Hollow Rd. from Chalkville-Clay Rd. westerly; 6 mi. Lock 17 Rd. from Hopkins to Oak Grove; 3 mi. Warrior-Cane Creek Rd. from Warrior to Cane Creek; leveling and sealing 4.6 mi. Mulga Loop Rd. from city limits at Wylam to intersection with Birmingham Rd. near Mulga; 5 mi. Chalkville-Clay Rd. from Chalkville to Clay. C. J. Rogers, co. engr.

Bids Asked

Iowa—State Hy. Comn., Ames, rejected bids July 11, imprv. 8.3 mi. Proj. M-5264, Lucas Co. Received no bids July 11, imprv. 45.4 mi. Proj. M-3320, Monona-Woodbury Counties. CD 7/3—ENR 7/6.

Kansas—State Hy. Dpt., Stockton, rejected bids June 30, imprv. 1.393 mi. Norton Co.; 6.497 mi. Smith Co.; 6.16 mi. Rawlins Co. CD 6/20—ENR 6/22.

LOW BIDDERS

†California — Pub. Roads Admin., 720 Phelan Bldg., San Francisco, July 11, 4.96 mi. access road project, Amador Co., from G. R. Patterson, P. O. Box 2004, Stockton. $96,661. CD 7/2.

California—State Div. Hys., Sacramento, July 12, imprv. 0.9 mi. Alameda Co., from Healey-Moore Co., 344 High St., Oakland, $59,476.

California—State Div. Hys., Sacramento, July 12, imprv. 4.6 mi. Butte Co., from Piazza & Huntley, 175 S. Montgomery St., San Jose, $89,875. CD 6/27—ENR 6/29.

Illinois—State Dpt. P. Wks. & Bldgs., Div. Hys., Springfield, July 14, imprv. roads La Salle Co., from J. P. Wetherby Constr. Co., Maloney Bldg., Ottawa, $47,823***Kendall, Kane and Du Page Counties, from George Welch, Hotel Sherman, Chicago, $58,000*** Bureau Co., from Crowley-Sheppard Asphalt Co., 12 Ave. and 19 St., Broadview, $23,042*** Du Page and Will Counties, from E. A. Meyer Constr. Co., 2259 W. Park Ave., Highland Park, $146,505***Livingston, Ford and Iroquois Counties, from Triangle Constr. Co., 480 North Evergreen Ave., Kankakee, $51,385***Montgomery Co., from J. C. Bremer, 629 Roundtree St., Hillsboro, $31,650. CD 7/6.

Ill., Chicago—City, Dpt. P. Wks., July 14, concrete paving N. Redzie Ave., Logan Sq. to N. Elston St., from Midwest Constr. & Asphalt Co., 228 N. La Salle St., $127,383.

Ill., Evanston—City, July 8, concrete paving 1.9646 mi. Proj. 28-CS, from Graham Paving & Constr. Co., 30 N. La Salle St., Chicago, $48,023.

Iowa—State Hy. Comn., Ames, July 11, imprv. 0.15 mi. Muscatine Co., from Collignan Constr. Co., 910 Kahl Bldg., Davenport, $29,983. CD 7/7.

Louisiana—State Dpt. Hys., Baton Rouge, July 12, imprv. 128.8 mi. Beauregard Parish, and 183.9 mi. Natchitoches Parish, from W. R. Aldrich & Co., Kalwaish University Gardens, Baton Rouge, $96,977 and $104,807 respectively. CD 7/6.

Mass., Boston—City, July 7, imprv. Pleasant St., Wards 13 and 15, and E. Cottage St., Wards 7 and 13, from Baker & Co., 1335 Hyde Park Ave., Hyde Park, $33,780; and from Ed. W. Matz, Inc., 25 Huntington Ave., $35,780. CD 6/29.

★Michigan—State Hy. Dpt., Lansing, July 7, imprv. 4 mi. Monroe Co. and 3 1/3 mi. Wayne Co., from Detroit Asphalt Paving Co., 702 Transportation Bldg., Detroit, $147,933 and $120,963 respectively*** 4 1/2 mi. Monroe Co., from Cooke Contg. Co., 1216 Penobscot Bldg., Detroit, $174,935 ***1.4 mi. Oakland Co., from Michigan Asphalt Paving Co., 321 Washington Sq. Bldg., Royal Oak $73,810***10.4 mi. Wayne and Washtenaw Counties, from Ann Arbor Constr. Co., Ann Arbor, $138,306. CD 6/23.

Missouri—State Hy. Comn., Jefferson City, July 7, imprv. 0.568 mi. Buchanan Co., from Buchanan Constr. Co., St. Joseph, $217,191*** 9.55 mi. St. Charles Co., from Valley Eng. Co., St. Charles, Ill., $41,301***0.713 mi. St. Louis Co., from Atkinson Windle Co., Inc., Chillicothe, $127,982***grading, rock protection, Montgomery Co., from W. J. Mueller Constr. Co., Sedalia, $24,655. CD 6/27—ENR 6/29.

Nevada—State Div. Hys., Carson City, access road to Blue Diamond Mine, Clark Co. from C. Frassini, Tonopah, $61,979. Robt. A. Allen, state hy. engr.

New Jersey—State Hy. Dpt., Trenton, July 10, constructing 0.94 mi. road and bridge, Jersey City, Hudson Co., from Franklin Contg. Co., 20 Washington Pl., Newark, $37,576. CD 7/3—ENR 7/6.

North Carolina—State Hy. & P. Wks. Comn., Raleigh, July 14, imprv. 10.45 mi. Durham and Granville Counties, from J. P. McGuire Constr. Co., Durham, $131,131, est. $100,000-$135,000; 11.7 mi. Guilford Co., from F. D. Cline, Fairview Rd., Raleigh, $137,334, est. $150,000-$175,000.

★Ohio—State Hy. Dpt., Columbus, July 11, from The Herwin Co., 913 Midland Bldg., Cleveland, 3.385 mi. Cuyahoga and Summit Counties, $63,378, est. $65,100; 2.665 mi. Cuyahoga Co., $47,287, est. $55,700; 1.118 mi. Cuyahoga Co., $45,079, est. $43,600***from Portage Bituminous Co., Andover, 12.93 mi. Portage, Stark and Summit Counties, $57,831, est. $60,443; 39.05 mi. Ashtabula, Mahoning and Trumbull Counties, $55,166, est. $54,112 ***from L. P. Cavett, 511 Shepherd Ave., Lockland, 5.512 mi. Darke Co., $73,961, est. $76,400***from Central Ohio Road Constr. Co., 19 E. Corry St., Cincinnati, 12.13 mi. Lawrence and Scioto Counties, $37,911, est. $38,824***from City Asphalt & Paving Co., 120 Pike St., Youngstown, 6.218 mi. Trumbull Co., $60,106, est. $58,900***from McCourt Constr. Co., 1000 Hazel St., Akron, 2.345 mi. Starke Co., $53,680, est. $53,930***from Brewer & Brewer Sons, Inc., 81 W. Water St., Chillicothe, 3.192 mi. Ross Co., $30,498, est. $10,500***from Koski Constr. Co., Natl. Bank Bldg., Ashtabula, 2.113 mi. Lake Co., $45,171, est. $45,400***from Scully Bros., 916 Atlas Bank Bldg., Cincinnati, 1.405 mi. Hamilton Co., $33,122, est. $33,140***from Mansfield Asphalt Paving Co., 153 Orange St., Mansfield, 0.939 mi. Crawford Co., $26,789, est. $27,100***from De Salvo Constr. Co., 4011 Erie Ave., Cincinnati, 0.524 mi. Montgomery and Greene Counties, $30,433. CD 6/29—ENR 7/6.

CONTRACTS AWARDED

Calif., Burbank—Lockheed Aircraft Co., 1705 Victory Pl., concrete and asphaltic concrete paving, curbs and walks at plant, to Ford J. Twaits Co., 451 S. Boyleston St., Los Angeles, $37,444. Bids 7/6.

Georgia—State Hy. Dpt., Atlanta, resurfacing 5.6 mi. State Route 19, Macon-Dublin Rd., Bibb Co., and 3 mi. Atlanta-Fairburn Rd., Fulton Co., to E. Jack Smith, Hurt Bldg., Atlanta, $42,812 and $45,990 respectively***14.236 mi. Canton Jasper Rd., Cherokee and Pickens Counties, to W. L. Cobb, Inc., Decatur, $46,987***grading, surface treating 14.631 mi. Pelham-Sale City Rd., Mitchell Co., to M. J. Carroll Contg. Co., Leesburg, Fla., $141,963***2.142 mi. surfaced treated road and 1 bridge culvert, North Druid Hills Rd., De Kalb Co., to E. A. Hudson's Sons, Bolton, $74,023. Grand total $352,339.

Ia., Primghar—Bd. Supervs. O'Brien Co., gravel surfacing various secondary roads, Divs. 1 and 2, to John Schumacher, Bancroft, $68,751. Bids 7/6. CD 6/23—ENR 6/29.

Kansas—State Hy. Dpt., El Dorado, imprv. 32.51 mi. Butler Co., to Inland Constr. Co., 3857 Leavenworth St., Omaha, Neb., $25,997. Bids 6/14, awarded 7/7. Rejected bids June 14 imprv. 15.042 mi. P. 5657 AB and 7 mi. P. 5634 Reno Co., 7.5 mi. P. 5652 and 3.301 mi. P. 5651 AB, Edwards Co., 12.168 mi. Pawnee Co. CD 5/31—ENR 6/8.

Kansas—State Hy. Dpt., Hiawatha, imprv. 10 mi. Brown Co., to Geo. Bennett Constr. Co., 901 N. 3 St., Kansas City, Kan., $37,985. Bids 6/23, awarded 7/7. Rejected bids June 23, imprv. 4.642 mi. Pottawatomie Co., 4.27 mi. Shawnee Co., and 10.933 mi. Wabaunsee Co. CD 6/13—ENR 6/15.

STREETS, etc. (Contracts Awarded, Cont'd.)

†Kan., Topeka—U. S. Eng., 10 E. 17 St., Kansas City, Mo., concrete road, Air Depot, to J. H. Casson & Son Const. Co., 1307 Tyler St., $60,000.

Michigan—State Hy. Dpt., Lansing, bituminous concrete resurfacing 4.761 mi. M-19-12 C-2 on U.S. 16, Clinton Co., to Hodgkiss & Douma, Box 311, Petoskey, $97,500. Bids 7/7. CD 6/23.

Michigan—State Hy. Dpt., Lansing, removing old concrete and concrete patching various locations 25 mi. road in Genesee, Oakland and Shiawassee Counties, to Denton Constr. Co., 4-255 General Motors Bldg., Detroit, $93,316***3.5 mi. Eaton and Ingham Counties, to Carl Goodwin & Sons, 500 Delano St., Allegan, $93,941.

New York—Dpt. P. Wks., Albany, improv. 1.62 mi. Orange Co., to D. V. Frione, Inc., 17 Fuxen Rd., New Haven, Conn., $213,404. Bids 6/1. CD 6/9.

O., Cleveland—Cuyahoga Co., paving Superior Rd. from Euclid to Mayfield Rds., to Allied Corp., Keith Bldg., $95,876. Est. $71,640. Bids 6/30.

O., Cleveland Heights—City, H. H. Canfield, mgr., 2953 Mayfield Rd., surface treating various roads, to W. L. Schloss Co., Terminal Tower, Cleveland, city engr. Bids 6/27.

Okla., Ardmore—U. S. Eng., 231 W. Main St., Denison, Tex., access roads, Contr. W-41-343-Eng-359, Army Airfield, to H. Newton, Graham, Tex., $44,696.

†Tenn., Memphis—U. S. Eng., Grant St. west of Westwood St., Mobile, Ala., paving, drainage, water distr. and sanitary sewerage sys., for addal. warehouse at AAF Supply Depot, to Dunn Constr. Co. & Polk Smart Pave. Co., Box 22, Hollywood Sta., Memphis, $53,786.

Tex., Dallas—Dallas Co., asphalt topping roads, own forces, $225,000.

Tex., Houston—Asphalt paving Southmore Blvd. and Center St., to Brown & Root, Rex 1, $64,412. Bids 7/5. J. Fugate, city engr.

Tex., Lamesa—Street improvs., 130,000 sq. yd. seal coat, etc., to Holland Pave. Georgetown Rd., Austin, approx. $56,000. French Eng. Co., Abilene, engr.

Virginia—State Hy. Dpt., Richmond, improv. 2.93 mi. Amelia Co., to Perkins-Barnes Constr. Co., Blackstone, $90,174***0.53 mi. Stafford Co., to Blackwell Eng. & Constr. Co., Warrenton, $38,758***1.07 mi. Russell Co., to W. Graham & Sons, Cleveland, N. C., $93,573. Grand total $344,344. Bids 7/6. CD 7/11—ENR 7/13, under LB.

EARTHWORK, WATERWAYS

PROPOSED WORK

La., Empire—State Dpt. P. Wks., Baton Rouge, constructing locks and channel improv., $186,000.

Pa., Altoona—Pennsylvania R. R., J. L. Gresitt, ch. engr., Broad St. Sta., Phila., soon lets contract increasing waterway over Juniata River, 3,250 cu. yd. excav. for retaining wall, 300 cu. yd. concrete for paving area and retaining wall, 20 mi. east of here. $30,000.

Tex., Anahuac—Chambers and Liberty Counties, c/o G. C. Jackson, Jr., judge Chambers Co., Anahuac, voted to issue $100,000 bonds, to organize Chambers-Liberty Co. Navigation Dist., embracing land adjacent to Trinity Bay and tributary lakes, creeks, bayous and streams.

BIDS ASKED

Bids Asked August 15

†Washington—Bureau Reclamation, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Odair, structural steel for floating caisson for maintenance of spillway bucket at Grand Coulee Dam, Columbia Basin Proj., Spec. 1077.

Bids Asked August 16

†Washington—Bureau Reclamation, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars at Odair, 4 caisson puller machines for maintenance of spillway bucket, Grand Coulee Dam, Columbia Basin project, Spec. 1753-D.

Bids Asked August 17

†Nebraska—Bureau Reclamation, Denver, Colo., 1,450 tons sand and 2,300 tons course aggregate for Box Butte Dam, Mirage Flats Project, Spec. 1759-D.

CONTRACTS AWARDED

†Illinois—U. S. Eng., 800 U. S. Court House & Customhouse, 12 and Market Sts., St. Louis, Mo., placing approx. 160,000 cu. yd. earth and repairing levees where recent flood waters have broken, to Luhr Bros. Excavating Contractors, Columbia. Est. $15,000. Bids 6/22.

†Louisiana and Texas—U. S. Eng., 25 St. and Avenue P, Galveston, Tex., electric facilities for flood-gates on Colorado River crossing on Intracoastal Waterway, to Rogers Electric Co., Henderson, Tex., approx. $25,000.

†Va., Norfolk—Yards & Docks, Navy Dpt., 13 St. and Constitution Ave. N.W., Wash., D. C., dredging, N. O. B. NOY 10293, to Norfolk Dredging Co., P. O. Box 486, $15,000; Norfolk Dredging Co., P. O. Box 486, to R. C. Huffman Constr. Co., 213 Summer St., Buffalo, N. Y., $165,000.

LATIN AMERICA

Mexico—Federal Health Ministry, Dr. G. Baz, secy., Presidential Palace, Mexico City, plans TB health clinics in Mexicali, Nogales, Juarez, Reynosa, Nuevo Laredo and Matamoros. $650,000.

Mexico—Kansas City, Mexico & Orient Ry., P. Fontes, gen. mgr., Chihuahua, will repair railroad, new rails, etc. in Sinaloa and Chihuahua, by own forces. $350,000.

Mexico—National Defense, Presidential Palace, Mexico City, will build military barracks at Saltillo and Torreon in Coahuila and city of Chihuahua, by own forces. $650,000. CD 5/16—ENR 5/18.

Mexico—National Railways, 19 Bolivar St., Mexico City, J. J. Franco, sub genl. mgr., will construct stores at terminals, by own forces, $750,000.

Mexico—National Railways of Mexico, L. Reina, ch. engr., Bolivar St., Mexico City, plans 22 mi. pipeline for Tampasopa to Cardenas in state of San Luis Potosi relieving tank cars. $100,000.

Mexico—State of Colima, Gov. M. Gudino, Capital City, Colima, will construct rural schools throughout state, by own forces. $450,000.

Mexico — State of Nayarit, G. Francisco Garcia Montero, gov., Tepic, plans 4 outdoor supermarkets. $900,000.

Mexico—State of Nayarit, Capital City, Tepic, directed Dr. G. Baz, secy. Federal Health Ministry, plans water sys. in cities of Compostela, Ahuacatlaan, Kuiz and Bellavista. $250,000.

Mexico—State of Sinaloa, Culiacan, plans reorganization water sys., sewage, general health organizations entire state, $180,000.

Mexico, Arriaga—City, M. J. Camacho, pres., will repair and construct city hall addns., by own forces, $160,000.

Mexico, Cuernavaca—Hernan Cortes S. A., c/o M. Leon Missot and R. Elguerro, Bellavista Hotel, plans new resort hotel, $500,000.

Mexico, Guadalajara—National Railways of Mexico, L. Reina, ch. engr., 19 Bolivar St., Mexico City, plans modern railroad station, $450,000.

Mexico, Mexico City—Federal Dpt. P. Wks., M. Camacho, dir., Presidential Palace, Mexico City, plans maternity hospital in suburb of Tacubaya, $300,000.

Mexico, Mexico City—New York Industrialists, c/o A. Cuadra, Mexico City, Mexico representative), plans stove factory. $5,000,000-$6,000,000.

Mexico, Mexico City—J. J. Ortiz, Caracas, Venezuela, plans large clothing factory, $125,000.

Mexico, Orizaba—Canada Dry Bottling Co., Calle 6 Oriente, plans new bottling plant, $10,000.

Mexico, Piedras Negras—City, bids probably within 90 days, constructing civic bldg. $175,000.

Mexico, San Bartolo Naucalpan—City, J. Guadalupe Cabanas, pres., plans dam for irrigation in city suburbs, $125,000.

Mexico, San Juan Parangaricutiro—Federal Dpt. P. Wks., M. Camacho, dir., Presidential Palace, Mexico City, will repair homes, streets, water sys., etc., resulting from Paricutin volcano, by own forces. $100,000.

Mexico, Suchiate—State of Chiapas, Gov. R. P. Camboa, Tuxtle Gutierrez, plans health city. $200,000.

Mexico, Texcoco—City, Guillermo Tirado, pres., bids within 90 days milk concentrate mfg. plant, $150,000.

Mexico, Vera Cruz—Marine Ministry, H. Jara, secy., Presidential Palace, Mexico City, will construct new cement docks, by own forces, $100,000.

Venezuela, Puerto de la Cruz—Sinclair Refining Co., Caracas, plans 25,000 bbl. capacity 86-octane gasoline refinery, crude and cracking stills, acid plant, electric generating station, hospital, school bldg., housing for employees, etc. $5,000,000. CD 6/13—ENR 6/22.

PUBLIC BUILDINGS

PROPOSED WORK

†Ariz., Litchfield Park—Goodyear Aircraft Corp., Arizona Div., Litchfield Park, steel hangar bldg. addn. $375,000. Defense Plant Corp. will finance. CD 6/26—ENR 6/1.

†Ariz., Phoenix—School Dist. 21, Maricopa Co., school, Ariz. 2-169-F. $30,500. FWA.

†Calif., Downey—Alameda School Dist. of Los Angeles Co., nursery bldg. Calif. 4-637-F. $21,040. FWA.

Calif., El Monte—El Monte School Dist. of Los Angeles Co. plans nursery school, Calif. 4-631-F. $16,400. FWA.

†Calif., Lemon Grove—Lemon Grove School Dist. of San Diego Co., nursery bldg., Calif. 4-632-F. $16,400. FWA.

†Calif., Long Beach—Public Housing Auth., NHA, Long Beach, 3 nursery bldgs. at Long Beach Housing, Calif. 4-638-F. $55,962. FWA.

†Calif., Los Angeles—Southern California Gas Co., 810 S. Flower St., butadiene gas mfg. plant, 527 Center St. $66,000. Defense Plant Corp. will finance. W. Fuessler, archt., and A. D. Stauffer, engr., c/o owner.

★†Calif., Lynwood—Sisters of St. Francis of Penance & Christian Charity, Lynwood, plans by G. Adams, 118 East Los Feliz Blvd., Glendale, St. Francis Hospital, Imperial Hy. and Century Blvd. $400,000. FWA.

†Calif., Oakland—Oakland City School Dist., Alameda Co., 2 nurseries, Calif. 4-630-F, $32,000. FWA.

†Calif., Oxnard — Pub. Housing Auth., NHA, 1301 Connecticut Ave. N.W., Wash., D. C., nursery bldg., Calif. 4-633-F. $18,316. FWA.

†Calif., Vallejo — Pub. Housing Auth., NHA, 735 Market St., San Francisco, plans by D. H. Horn, Claremont Hotel, Berkeley, 40 bed, wood frame infirmary bldg., for housing, Calif. 4511. $75,000.

†Conn., Plainville—Pub. Housing Auth., NHA, 14 School St., Boston, Mass., grading work, constructing utilities, housing, Conn. 4035.

†Conn., Wethersfield—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., plans by C. A. Currier, 947 Farmington Ave., West Hartford, grading, site improvs., utilities, etc., housing Conn. 4039.

†Fla., Panama City—Kilbourn Ice Co., Panama City, plant bldgs. $150,000. Defense Plant Corp. will finance.

†Fla., Pensacola—Yards & Docks, Navy Dpt., 13 St. and Constitution Ave. N.W., Wash., D. C., architectural and engineering services by Yonge & Hart, Theisen Bldg., 300 low-cost defense housing units, N.A.T.C.

Ga., Carrollton—City, L. M. King, treas., City Hall, plans by Chas. H. McCauley, Jackson Bldg., Birmingham, Ala., hospital $300,000.

†Ga., Marietta—Bd. Educ., school, Ga 9-303-F. $125,000. FWA.

†Ga., Marietta—Robert L. Cobourns School District, Cobb Co., high school, Ga. 9-295-F. $141,500. FWA.

†Ill., Champaign—Federal Works Agency, 20 N. Wacker Dr., Chicago, Zone 6, 2 story, bsmnt. bldg. for student nurses at Julia F. Burnham School of Nursing, Ill. 11-398-N. $135,000.

†Ill., Chicago—Federal Works Agency, 20 N. Wacker Dr., Zone 6, 2 story, bsmnt. bldg. for student nurses at Henrotin Hospital, Ill. 11-266-N. $60,000.

Ill., Chicago—City Bd. Educ., 228 N. La Salle St., plans by J. C. Christensen, 123 N. LaSalle St., 2 story, brick, concrete Gillespie School addn., 3201 S. State St.

†Ind., Calumet — Calumet School Twp., Lake Co. school, Ind. 12-218-N. $147,350. FWA.

Ind., Evansville — J. Graddy, trustee Knight Twp., 3151 Division St., sketches by R. Lageman, 226 Main St., rebuilding 1 story, bsmnt. high and grade school, near here. $150,000. CD 6/1—ENR 6/8.

†Ind., Knight Twp.—Federal Works Agency, 20 N. Wacker Dr., Chicago, 6, Ill., 10 and 4 classroom school bldgs., incl. deep well water supply, Ind. 13-206-N. Vanderburgh Co. $194,000.

La., Alexandria—State, Baton Rouge, improv. State Colony and Training School $300,000.

★La., Jackson—State, Baton Rouge, improv. East Louisiana State Hospital. $1,000,000.

La., Pineville—State, Baton Rouge, improv. Central Louisiana State Hospital. $350,000.

†Md., Aberdeen Proving Ground—U. S. Eng., Standard Oil Bldg., Baltimore, bids soon instrument and hot rooms. $42,000.

Md., Baltimore—City, City Hall, plans by Buckler & Fenhagen, 325 N. Charles St., elementary and high school bldg. $200,000.

†Md., Baltimore—U. S. Eng., Standard Oil Bldg., 1 story, rein.-con. film storage vaults. $79,500.

†Md., Cumberland—Allegany Hospital of Sisters of Charity, Inc., plans dismantling, transporting, erecting demountable dormitory, from Dublin, Va. to here, also constructing ground floor section. Md. 13-203-F. $75,700. FWA.

†Mich., Berkley—School Dist. 3, Royal Oak Twp., 2 story, part-basement school. Mich. 20-258-N. $55,000.

PUBLIC BLDGS. (Proposed Work, Cont'd.)

★†Mich., Detroit—Sisters of St. Francis, Sylvania, O., hospitall, Mich. 20-342-N. $583,604. FWA.

†Mich., Garden City—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash., 25, D. C., 1 story, 78x127 ft., brick, concrete recreation bldg. $75,000. FWA. No bid opening date set. CD 6/30—ENR 7/5, under BA.

†Mich., Inkster—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash., 25, D.C., 12 classroom 1 story school bldg., Mich. 2-343.

†Mich., Muskegon—Lakey Foundry & Machine Co., Muskegon, addn. plant bldgs. $30,000. Defense Plant Corp. will finance.

†Mich., Royal Oak—Pub. Housing Auth., NHA, 1201 Connecticut Ave. N.W., Wash., 25, D. C., school, Mich 20-363-F. $281,600. FWA.

Miss., Jackson—Parchman State Penitentiary, c/o M. Wiggins, supt., Jackson, rebuilding penitentiary bldg. $150,000-$200,000.

†Mo., Independence — Consolidated Dist. 36, Jackson Co. school, near here. Mo. 23-301-N. $80,000. FWA.

†N. J., Princeton—Heyden Chemical Corp., 50 Union Sq., New York, N. Y., plant facilities. $215,000. Defense Plant Corp. will finance.

★N. C., Burlington—Burlington Hospital, Burlington, exten. hospital. $500,000. Will seek FWA grant.

†N. C., Fayetteville—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, 3, Ga., rejected bids July 11, community bldg., N.C. 31-011. Will readvertise. CD 7/5.

†N. C., Kinston—Eastern Carolina Hospital Corp., 2 story, part bsmnt. nurses home, N.C. 31-295-N. $67,300. FWA.

†N. C., Rutherfordton—Rutherford Hospital, Rutherfordton, nurses' home. $38,000. FWA.

†Ore., Springfield—Columbia School Dist. 19, Lane Co., nursery school, Ore. 35-181-F. $17,700. FWA.

★†Pa., Johnstown—Bethlehem Steel Co., W. C. Frank, ch. engr., 315 Locust St., sketches by Rust Eng. Co., engr.-archt., Clark Bldg., Pittsburgh, 1 story, 300x600 ft., steel frame forging plant. $10,000,000. Federally financed.

†Tex., Abilene—Wylie Consolidated School Dist., high school, Tex., 41-684-N. $31,250. FWA.

†Tex., Houston—Sheffield Steel of Texas, Div. of The American Rolling Mill Co., 3500 Maury St., Houston, plant facilities. $450,-000. Defense Plant Corp. will finance.

†Tex., Corpus Christi—Corpus Christi Independent School Dist., 2 schools, Tex. 41-685-N. $110,500. FWA.

★†Virginia—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., bids soon 6 storehouses, railroad facilities, etc., at Naval Supply Depot, Pennimax, NOY 10162. $4,000,000.

†Va., Richmond—St. Philip's Hospital, 1207 E. Marshall St., plans by Baskerville & Son, Center National Bank Bldg., hospital imprvs., Va. 44-397. $69,000. FWA.

BIDS ASKED

Bids Asked July 25

†Conn., Wethersfield—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., grading, site imprvs., utilities, Conn. 6029, Chas. A. Currier, 967 Farmington Ave., West Hartford, archt. CD 7/14—ENR 7/20.

†Me., Brunswick—Federal Works Agency, 99 Chauncy St., Boston, Mass., brick superstructure recreation bldg., Me. 17-166-F. Plans deposit $15 each set. A. J. Harriman, 88 Shepley St., Auburn, archt. CD 6/27—ENR 6/29.

Bids Asked July 26

†Ga., Marietta—Federal Works Agency, c/o J. C. Daniel, Sr., engr., 20 Fifth St. N.W., Atlanta, 2 child care bldgs., Ga. 9-301-F. R. E. Nash, Marietta, archt. CD 6/7—ENR 6/15.

†Md., Patuxent River (br. Wash., D. C.)—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., temporary post office, Naval Air Station, NOY 9827. $50,000. CD 7/12.

Bids Asked July 27

†N. M., Vaughn—Pub. Housing Auth., NHA, 1205 Electric Bldg., Fort Worth, Tex., 40 family dwelling units, N.M. 29177. Plans deposit $50. Extended date. Haynes, Strange, Parkhill, Voelcker & Dixon, Myrick Bldg., Lubbock, Tex., archts.

Ont., Toronto—Secretary Dpt. Munitions & Supply, Ottawa, constructing Naval Training Station H.M.C.S. York, Fleet St. W., for Dpt. National Defense (Sea), Ottawa. $250,000. CD 12/14—ENR 12/16.

Bids Asked July 31

†Mo., St. Louis—Missouri Baptist Hospital, E. S. Pillsbury, pres., 919 North Taylor Ave., Zone 13, 4 story, bsmnt., 42x61x105 ft. L-shaped nurses' home addn., 4515 McMillan Ave., Mo. 23-300 N. $200,000. FWA. Plans deposit $25. L. Baylor Pendleton & Wm. B. Ittner, Inc., 403 Bd. Educ. Bldg., 911 Locust St., Zone 1, engrs.-archts. CD 5/3—ENR 5/11, under Commercial Bldgs.

★†Pa., Farrell—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., 150 two story, bsmnt., permanent family dwelling units, Pa. 20-1. Plans deposit $50, refundable. Burke, Smart & Brazieli, 306 Magee Bldg., Pittsburgh, engrs. and archts. $700,000. CD 7/12—ENR 7/13.

†Va., Oceana—At office Rudolph, Cooke & Van Leeuwen, Inc., archts., 355 Monticello Arcade Bldg., Norfolk, 2 story, brick, cinderblock high school bldg. addn., Va. 44-108, for Princess Anne Co. School Bd. $111,230. FWA. Plans deposit $35.

Bids Asked August 1

†La., Baton Rouge—Bodman & Murrell, archts., 713 Raymond Bldg., nurses' home, La. 16-256-N, for Our Lady of the Lake Sanitarium, c/o Sister Didiesse, Across Dyke. $96,600. Plans deposit $25. Extended date. CD 7/12.

†Mich., Wayne—Federal Works Agency, 18 and F Sts., Wash., 25, D. C., school, Mich. 20-336. O'Dell, Hewlett & Luckenbach, 2317 Dime Bldg., Detroit, archts. CD 7/5—ENR 7/13.

★†N. J., Newark—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., 150 family dwelling units, N. J. 2-9. Plans deposit $50. $600,000. W. E. Lehman, 972 Broad St., archt. CD 7/11—ENR 7/13.

†Okla., Midwest City—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash., 25, D. C., 1 story, part bsmnt., school and recreation bldg., Okla. 34-173-A. FWA. Extended date. Hudgins Ball & Associates, 919 Cotton Exchange Bldg., Oklahoma City, archts. CD 7/5—ENR 7/13.

Bids Asked

†Pa., Chester—Federal Works Agency, 101 Park Ave., New York, 17, N. Y., community and recreation bldg., Pa. 36199. $300,000. H. R. Robinson, 1927 11 St. N.W., Wash., D. C., archt. CD 5/29—ENR 6/1.

LOW BIDDERS

†Calif., Oxnard—Pub. Housing Auth., NHA, 785 Market St., San Francisco, July 14, site imprvs., for 500 portable dwelling units, Calif. 4861, from Shumaker-Evans Co., 832 W. 5 St., Los Angeles, $204,976. Soule & Murphy, 116 E. Sola St., Santa Barbara, archts. CD 6/7—ENR 6/15.

†Fla., Miami—City, A. B. Curry, mgr., City Hall, July 5, 3 story addn. to Woodward Bldg., and 2 story nurses' home addn., Fla. 8-302, from Gust. K. Newberg, 262 E. 89 Pl., Chicago, Ill., $288,369. FWA. A. Geiger, Miami Beach, archt. CD 6/1—ENR 6/8.

★†La., New Orleans—Pub. Housing Auth., NHA, 1205 Electric Bldg., Forth Worth, Tex., July 13, 150 family dwelling units, La. 16106, from R. P. Farnsworth, 1515 S. Salcedo St., $799,962. CD 7/6.

†Md., Indian Head—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., July 10, housing for Waves at Naval Powder Factory, NOY 9192, from Ross Engineering Co., 2304 14 St. N.W., Wash., D. C. $217,000. CD 6/27—ENR 6/29.

†Md., Indian Head—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C. July 10, magazines for explosives investigation laboratory, NOY 8931, from F. H. Martell Co., 920 17th St. N.W., Wash., D. C. $158,460. CD 7/6—ENR 7/13.

†Wis., Eau Claire—Luther Hospital, 310 Chestnut St., July 10, 2 story, brick hospital addn., remodeling, Wis. 47-163-N, from Helander & Kaufman, 175 W. Jackson Blvd., Chicago, Ill., $149,950. FWA. CD 6/13—ENR 6/15.

†Wis., Merrimac—U. S. Eng., 408 Federal Bldg., Milwaukee, July 11, interior electrical work for Line N Bldgs., from Bradford Electric Co., 323 N. Lake St., Madison, $138,-075; July 10, insulation southside steam lines, from Asbestos & Magnesia Mfg. Co., 119 N. Peoria St., Chicago, Ill., $277,469, both at Badger Ordnance Plant. Mason & Hanger Co., 500 Fifth Ave., New York, N. Y., engrs.-archt. Hercules Powder Co., 908 Market St., Wilmington, Del., will operate.

B. C., Victoria—Royal Jubilee Hospital, 1900 Fort St., 3 story, rein.-con. maternity pavilion, main wing 60x184 ft., centre wing exten. back 45 ft., from G. H. Wheaton, 308 Scollard Bldg., $278,443. Bids 7/5. CD 6/20—ENR 6/22.

CONTRACTS AWARDED

†Calif., Burbank—Lockheed Aircraft Co., 2555 Hollywood Way, 30x480 ft. wood frame factory, to H. M. Kellar Co., 4604 Hollywood Blvd., Los Angeles, $30,462. Bids 7/6. Defense Plant Corp. will finance. CD 2/29—ENR 3/2.

†Calif., Fontana—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, bldgs. at Kaiser Shell Plant to Mead & O'Donnell, 7769 Melrose Ave., Los Angeles, $52,730. Bids 6/30.

†Calif., Mare Island—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., ordnance storehouse, Navy Yard, NOY 9003, to M. J. King, 231 Franklin St., San Francisco, Zone 2, $490,323.

†Calif., Oakland—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., Wave housing, mess and recreation bldg., NOY 9204, to Moore & Roberts, 693 Mission St., San Francisco, $390,351.

†Conn., East Hartford—Pratt & Whitney Div. United Aircraft Corp., 400 Main St., 2 story, 50x163 ft. and 93x145 ft. laboratory, to Wadhams, May & Carey Co., 15 Lewis St., Hartford, $495,000. Federally financed. Bids 6/30. Albert Kahn, Associated Architects & Engineers, 345 New Center Bldg., Detroit, Mich., engrs.

†Ind., Crane—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., equip., facilities and addnl. construction boiler house, Major Calibre Loading Plant, Naval Ammunition Depot, NOY 9893, to Hayes Bros., Inc., 236-238 W. Vermont St., Indianapolis, $47,118.

La., Alexandria—City, bus storage bldg., to Barnet Breiner, 2833 Lee St., approx $41,000.

†La., Shreveport—J. B. Beard Co., 6200 S. Vincent St., machine shop bldg., to W. Murray Werner Co., Box 908, $227,920. Defense Plant Corp. will finance. E. F. Neild, City Bank Bldg., archt. CD 6/26—ENR 6/29.

★†N. Y., Long Island City—U. S. Eng., 120 Wall St., New York, Zone 5, superstructure post office, to John A. Johnson & Sons, 268 41 St., Brooklyn, Zone 32, $2,335,916. Bids 5/19. CD 6/21—ENR 6/29, under LD.

†O., Shelby—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, moving 427 single person units from Ravenna and reerecting same into 7 bldgs. of 61 units each, to W. B. Gibson Co., 200 Chestnut St., Warren, $167,484. Maier, Outcalt, Dickerson & Associates, 13124 Shaker Sq., Cleveland, archts.

†Pa., Titusville—Struthers Wells Corp., Titusville, substructure and superstructure conversion, plant addn. alterations, to H. Platt Co., 922 Raspberry St., Erie, $118,000; electrical sys., to Ross Electric Constr. Co., 2205 East St., Pittsburgh, $38,500. Federally financed. CD 6/30—ENR 7/6.

†Tenn., Memphis—Southern Acid & Sulphur Co., c/o T. J. Twomey, plant mgr., Warford Ave., chemical plant expansion, to H. K. Ferguson, Hanna Bldg., Cleveland, O. Est. $330,000. Defense Plant Corp. will finance. CD 7/10—ENR 7/13.

†Tex., Dalhart—U. S. Eng., 416 Wright Bldg., Tulsa, 2, Okla., 25x64 ft. gunnery maint. shop, 2 celestial navigation trainer bldgs., concrete apron paving, boiler house exten., steam distr. sys., Sol. 34-066-44-105, Lot 1, to Industrial Constr. Co., Muskogee, Okla., $86,600, est. $80,000; Lot 2, fueling sys., to H. J. Happel Co., Muskogee, Okla., $27,760. CD 6/31—ENR 6/8.

†Tex., Orange, Port Arthur and Port Neches—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts. Fort Worth, trailer work and facilities for living quarters, Tex. 41-78, 41174, 41621, 41591 and 41197, to Henderson Bros., Inc., 7051 Chocolate Bayou, Houston, $165,922. Consolidated Architects & Engineers, 413 Capps Bldg., Fort Worth, engrs. and archts.

★†Wis., Merrimac—U. S. Eng., 408 Federal Bldg., Milwaukee, 51 roll houses, to Standard Constr. Co., 604 National Bldg., Minneapolis, Minn., $743,988. Bids 6/22. Hercules Powder Co., will operate. Mason & Hanger Co., 500 Fifth Ave., New York, N. Y., engr.-archt.

N. S., Halifax—City, brick tuberculosis hospital addn., concrete fdn., to Foundation Maritime, Ltd., 135 Lower Water St., $348,-293. Est. $200,000. Bids 6/28. CD 6/16—ENR 6/22.

★N. S., Halifax—Province of Nova Scotia, Dpt. P. Wks., Halifax, 15 story Victoria General Hospital, to Brookfield Constr. Co., Ltd., 169 Hollis St., about $1,500,000. C. St. J. Wilson, Roy Bldg., Barrington St., archt. CD 6/1—ENR 6/8.

COMMERCIAL BUILDINGS

PROPOSED WORK

La., New Orleans—Herbert A. Benson, archt., 1048 Canal Bldg., soon lets contract converting Louisiana Bldg., Camp and Gravier Sts., into headquarters for International House. $200,000.

O., Cleveland—St. Malachi Roman Catholic Church, Rev. Ge. F. Martin, pastor, Washington Ave., plans by Geo. W. Stickle, 729 Caxton Bldg., rebuilding brick, steel, concrete church. $150,000. CD 1/4—ENR 1/6.

Tex., Abilene—Hendrick Memorial Hostal, Abilene, soon lets contract 4 story, 36x63 ft., concrete, frame, brick, cast stone hospital. Plans deposit $5. Hughes & Olds, 153½ Cypress St., archts.

COMMERCIAL BLDGS. (Cont'd.)

BIDS ASKED

Bids Asked August 1

Ark., Hot Springs—Malco Theatre Co., Inc., 317-323 Central Ave., theatre. $250,000. Brueggeman, Swain & Allen, Gazette Bldg., Little Rock, archts. CD 7/6—ENR 7/13.

Bids Asked About August 1

★**Ill., Decatur**—Moser Lain Corp., A. F. Dickerson, pres., Milliken Bank Bldg., eighty-one 1 story, brick houses. $504,000. J. Fletcher Lankton & John M. Ziegele, 1805 Knoxville St., Peoria, archts.

CONTRACTS AWARDED

Calif., Long Beach—Henry C. Cox Constr. Co., 220 Atlantic Ave., 77 frame, stucco residences, in Naples. Dist. own force. $250,000.

Calif., Los Angeles—Owner, c/o contractor, 19 apartment bldgs., 35 and Cimmaron Sts., to C. W. Saunders, 3004 Rowena Ave. $250,000. L. L. Jones, 1548 W. 7 St., archt.

Ill., Chicago—Thaddeus Stevens Land Trust Co., c/o George & Fred Kock, archts., 612 N. Michigan Ave., commercial center, Ellis Ave. and 121 St., to Perry Constr. Co., 176 W. Adams St. Est. $300,000.

Ill., La Grange—Leonard Besinger, 1503 Monroe St., River Forest, 50 residences. Owner builds. About $250,000. Carl J. Kastrup, 7346 Madison St., Forest Park, archt.

Miss., Vicksburg—Hill City Homes, Inc., c/o W. P. Bridges, Bridges Bldg., Jackson, 55 dwellings. Owner builds. $250,000.

Utah, Salt Lake City—Cottage Homes, Inc., c/o contractor, 60 brick residences, southeast part of city, to Bowers Bldg. & Constr. Co., 1033 S. State St. Est. $270,000.

INDUSTRIAL BUILDINGS

PROPOSED WORK

Ga., Pelham—PLANT—Pelham Oil & Fertilizer Co., bids soon 1 story, 60x120 ft., frame, corrugated iron storage plant and 1 story, 48x64 ft. shelling plant. Over $40,000. T. M. Francis, Brown Marx Bldg., Birmingham, Ala., engrs.

Ind., Delphi—PLANT—Globe Valve Co., Delphi, rebuilding plant, destroyed by fire. $125,000, incl. equip.

Ind., Jeffersonville—PLANT—George Pfau Oil Co., Jeffersonville, rebuilding plant, destroyed by fire. $100,000, incl. equip.

Ky., Louisville—PLANT—National Distillers Products Corp., 120 Bway., New York, N. Y., evaporator bldg. and dryer house. $42,250.

La., Fowler (mail Fairbanks)—GAS COMPRESSORS, etc.—Interstate Natural Gas Co., Inc., Monroe, two 1,000 hp. gas compressors, housing, auxiliary equip., etc. Over $40,000.

Mich., Escanaba—WAREHOUSE—Delta Warehouse Co., Escanaba, plans by G. Arntzen, Escanaba, 1 story, 120x233 ft. brick, steel, concrete warehouse, $60,000.

Neb., Ralston—PROCESSING PLANT—Refinite Corp., 11 and Harney Sts., Omaha, bids soon plant. $250,000. Henningson Eng. Co., Standard Oil Bldg., Omaha, engrs.

N. Y., Jamestown—PLANT—Automatic Voting Machine Corp., Jones and Gifford Aves., plans by Beck & Tinkham, Bailey Bldg., 4 story, bsmnt., 61x149 ft. plant addn. Over $45,000.

N. C., Shelby—PLANT—Carolina Dairy, John Burn, prop., Shelby, plans nearing completion by V. W. Breeze, Shelby, 1 story, steel, concrete plant, Grover St. and Fallston Rd. $56,000.

O., Akron—FACTORY—Killian Mfg. Co., 355 Morgan St., factory addn. $55,550.

O., Cambridge—FACTORY—Reynolds Molded Plastics Div. of Continental Can Co., Inc., W. W. Taylor, ch. engr., 4623 W. Grand Ave., Chicago, Ill., soon lets contract 280x400 ft., brick, rein.-con. factory. Fred D. Jacobs, 514 Main St., Coshocton, archt.

O., Campbell—FOUNDRY—Youngstown Sheet & Tube Co., Stambaugh Bldg., Youngstown, relocating, rebuilding grey iron fdry. $135,800.

O., Fostoria—FACTORY—Baugh & Sons Co., Fostoria, factory addn. $57,500.

O., Massillon—BOILER HOUSE—Republic Steel Corp., A. McAllister, purch. agt., Republic Bldg., Cleveland, boiler house addn. $200,000.

O., St. Bernard—PLANT—Emery Industries, Carew Tower, Cincinnati, plans by Wm. B. Ward, 2956 Douglas Terrace, Cincinnati, mfg. plant. $351,659.

O., Warren—COKE OVENS—Republic Steel Corp., A. McAllister, purch. agt., Republic Bldg., Cleveland, coal accelorator equip. for coke ovens. $59,000.

Tex., Amarillo—WAREHOUSE—Jack Ellis, Amarillo, warehouse. $40,000.

Tex., Fort Worth—BAKERY—Julian Ball, 300 S. Main St., 50x350 ft. tile bakery, concrete fdn. $40,000.

Tex., Lubbock—WAREHOUSE, etc.—Luther Transfer & Storage Co., Lubbock, soon lets contract 1 story, brick, hollow tile, rein.-con. warehouse and storage bldg. Haynes & Strange, 415 Myrick Bldg., archts. CD 7/7—ENR 7/13.

Virginia—FROZEN FOOD LOCKER PLANT—Southside Refrigeration Corp., Inc., Crewe, frozen food locker plant, Nottoway Co. $53,000.

BIDS ASKED

Bids Asked August 1

Va., Norfolk—INTERLOCKING PLANTS, etc.—Virginia Ry. Co., A. M. Traugott, ch. engr., Terminal Bldg., Zone 10, furnishing, installing, ready for operation interlocking plants, automatic block signals and hy. crossing protection 14 mi. from Sewalls Point to South Branch Yard. Contr. form E-7, Bond form E-8, plans and specifications file C-16074. Extended date. CD 6/14—ENR 6/22.

Bids Asked

Pa., Coraopolis—WAREHOUSE—Homestead Valve Mfg. Co., S. E. Schuchman, genl. mgr., Box H, preliminary bids 1 story, 50x200 ft. concrete block warehouse. $40,000.

CONTRACTS AWARDED

★**Calif., Torrance**—STOKER UNIT—General Petroleum Corp., 108 W. 2 St., Los Angeles, design and construction stoker unit for twin unit cracking plant, structural steel refinery bldgs., piling fdn., to M. W. Kellogg Co., 190 and Figueroa Sts., Gardena, approx. $5,000,000. CD 7/6—ENR 7/13.

Conn., New London—BUS GARAGE—Connecticut Co., 154 Montauk Ave., 1 story, 70x175 ft. and 30x65 ft. bus garage, Montauk Ave., to John D. McWilliams & Co., 24 Falls Ave., Norwich, $65,000. Bids 6/15. CD 6/9—ENR 6/15.

Ill., Chicago—FACTORY—Victor Adding Machine Co., 3900 N. Rockwell St., 2 story, 61x91 ft., brick factory addn., to Henry Ericsson Co., 228 N. La Salle St., $80,500. Olsen & Urbain, 75 E. Wacker Dr., archts.

Ill., Chicago—PLANT—Oscar Mayer & Co., 2141 N. Sedgwick St., 1 story beef cooler addn., brick, 312-14 W. Scott St., to J. T. Carp, Inc., 1791 W. Howard St., $50,000. Henschien, Everds & Crombie, 53 E. Van Buren St., archts.

★**La., Baton Rouge**—PLANT—Consolidated Chemical, Inc., North Baton Rouge, chemical plant addn., force account. $500,000.

★**La., Haynesville**—GASOLINE and CYCLING PLANT—Ohio Co., Midstates Oil Corp., Gulf Refining Co. & Associates, City Bank Bldg., Shreveport, design and construction gasoline and cycling plant, to Jones & Laughlin Supply Co., Petroleum Bldg., Tulsa, Okla., approx. $1,750,000. CD 6/15—ENR 6/22.

La., Shreveport—PLANT—J. B. Beaird Corp., 6200 St. Vincent Ave., building to house new shell machining and forging plant, Vincent Ave., to The Werner Co., 1320 Pierre Ave., $227,920. Ed. F. Neil City Bank Bldg., archt.

Md., Baltimore—PLANT—Southern States Co-operative, Inc., 2101 E. Fort Ave., 1 and 2 story bldgs., grain bins, etc., for seed plant, to Baltimore Contractors, 711 S. Central Ave., $100,000. Porter T. Bond, 618 E. 34 St., archt.

Mass., Cambridge—WAREHOUSE, etc.—Industrial Steels, Inc., 250 Bent St., brick warehouse, laboratory unit, Bent St., to Walter Curley & Son, 21 King St., Roxbury. Est. $45,000. Thos. F. McDonough, 25 Huntington Ave., Boston, archt.

Minn., St. Paul—PLANT—Minnesota Farm Bureau Federation, 92 East Fairview Ave., general contract 1, 2 and 3 story, 175x300 ft. fertilizer plant, corrugated iron walls, steel frame, along south bank Mississippi River between Alabama and Chester Sts., to Hagstrom Constr. Co., 490 N. Snelling Ave., and W. W. Magee Co., 180 N. Snelling Ave. Est. complete $250,000. Bids 6/15. Minnesota Farm Bureau Service, D. A. Williams, mgr., 92 East Fairview Ave., lessee. CD 6/1—ENR 6/8.

N. Y., Mechanicsville—SHOP—Boston & Maine R.R. Co., T. G. Sughrue, ch. engr., 150 Causeway, Boston, Mass., brick, Diesel locomotive shop, to George A. Fuller Co., 11 Beacon St., Boston, Mass. Est. over $40,000. Bids 7/10. CD 6/27—ENR 6/29.

O., Cleveland—FACTORY—Container Corp. of America, Wm. Hazsels, 12401 Euclid Ave., altering factory, to Albert M. Higley Co., 2036 E. 22 St. Est. $50,000. J. K. Johnson, c/o owner, 111 W. Washington St., Chicago, Ill., archt.

O., Cleveland—FOUNDRY, etc.—Republic Brass Co., D. A. Blywise, pres., 1623 E. 45 St., 1 story, 19x136 ft. foundry addn. and 1 story, 13x29x43x73 ft. boiler room addn., brick, steel, to Dean W. Rankin, 1836 Euclid Ave. Est. $40,000. CD 7/11—ENR 7/13.

S. C., Moncks Corner—WAREHOUSE—South Carolina Pub. Service Auth., 1246 Main St., Columbia, warehouse, to Morris Constr. Co., Greenville, $29,490; office bldg., to General Constr. Co., Columbia Record Bldg., Columbia, $66,000. CD 6/27—ENR 6/29, under LB.

Tex., Dallas—COLD STORAGE PLANT—Merchants Cold Storage Co., 1301 Brooms St., Dallas, cold storage plant unit, to Cedric Burgher Constr. Co., 3027 Main St., approx. $200,000. CD 7/11—ENR 7/13.

Tex., Dallas—SHOP—Gulberson Corp., 1000 Forest Ave., masonry type shop plant unit (engines), to A. O. Guthrie, 1118 Newport St., $40,000. CD 9/16—ENR 9/23.

Tex., Houston—SHOP—Dee Brass Foundry Works 2408 N. Everett St., 1 story shop unit, masonry walls, to R. E. Sullivan, 821 1st Natl. Bank Bldg., approx. $41,000.

Tex., Mission—PACKING PLANT—Mission Citrus Growers Union, c/o F. B. Holland, 615½ E. 8 St., 2 story, brick, rein.-con. packing plant, to H. B. Swedlund & Son, Weslaco, approx. $135,000. CD 4/7—ENR 4/13.

B. C., Vancouver—CATTLE STORAGE—American Livestock Exporters Ltd. 81 W. Pender St., general contract 230x330 ft. heavy frame cattle storage bldg., to Vancouver Constr. Co., Ltd., 827-29 Rogers Bldg., $85,000. Sharp & Thompson, 626 W. Pender St., archts.

B. C., Westbank—PACKING HOUSE, etc.—Westbank Co-operative Growers Assn., Westbank, 1 story, 122x196 ft., and 3 story, 65x156 ft. frame, stucco packing house and cold storage unit, to Dominion Constr. Co., Ltd., 150 W. 1 Ave., Vancouver, $70,000. Robt. Lyon, Penticton, archt. Awarded 7/10. CD 4/17.

UNCLASSIFIED

PROPOSED WORK

Arkansas—RURAL ELECTRIC LINES—First Electric Cooperative Corp., Jacksonville, rural electric lines, Pulaski Co. $50,000.

★**Calif., Long Beach**—WHARF—City Harbor Dpt., 1333 El Embarcadero, 2600 ft. concrete wharf, 73 ft. wide, rein.-con. piling, connecting Pier A with Victory Pier, providing Berths 4, 5, 6 and 7, sheet steel bulkhead, fdns. for 3 bldgs., trackage, utilities, storm drains, paving etc. $1,500,000. R. R. Shoemaker, 1333 El Embarcadero, engr.

Colorado—RURAL ELECTRIC LINES—Poudre Rural Electric Assn., Inc., Fort Collins, rural electric lines, Larimer Co. $85,000.

Colorado—RURAL ELECTRIC LINES—Union Rural Electric Assn., Inc., Brighton, rural electric lines, Adams Co. $50,000.

Colo., Holyoke—SUBSTATION, etc.—Highline Electric Assn., Main and Denver Sts., Holyoke, soon lets contract furnishing substation, switching structure, oil circuit breaker, equip. for Rural Electrification Admin. Project Colorado 1029D1 Phillips, Sect. 2. Rocky Mountain Eng. Co., 212 McClintock Bldg., 1554 California St., Denver, 2, engrs.

Indiana—RURAL ELECTRIC LINES—Whitley Co. R. E. M. Co., Columbia City, rural electric lines, Whitley Co., $25,000.

Iowa—RURAL ELECTRIC LINES—O'Brien Co. Rural Electric Cooperative, Thompson, rural electric lines, O'Brien Co. $45,000.

Iowa—RURAL ELECTRIC LINES—Winnebago Rural Electric Cooperative Assoc., Thompson, rural electric lines, Winnebago Co., $70,000.

Ia., Boone—AIRPORT—City, L. McCambridge, clk., City Hall, municipal airport. $60,000. The Stanley Engineering Co., Muscatine, engrs. CD 2/16—ENR 2/24.

†**Ia., Iowa City**—AIRPORT—G. J. Dohrer, city clk., approved $80,000 bond issue, municipal airport. $382,500. CAA. CD. 12/29—ENR 1/6.

Kansas and Oklahoma—GAS PIPELINE—Consolidated Gas Utilities Corp., Braniff Bldg., Oklahoma City, Okla., 1 mi. 4½ in. and 3½ mi. 8⅝ in. pipeline in Chase, area, Kan. and Anadarko area, Okla. Over $40,000.

Kentucky—RURAL ELECTRIC LINES—Licking Valley Rural Elec. Coop. Corp., West Liberty, rural electric lines, Morgan Co. $145,000.

La., Perryville (mail Fairbanks)—REMOVING GAS PIPELINE—Interstate Natural Gas Co., Inc., Monroe, removing 40,840 lin. ft. 16 in. gas pipeline. Over $40,000.

Mass., Southbridge—AIRFIELD——Bd. Selectmen, Town Hall, airport, incl. hangar, 2,000 ft. and 2,500 ft. runways. $100,000. Hayden, Harding & Buchanan, 662 Park Sq. Bldg., Boston, engrs.

Michigan—RURAL ELECTRIC LINES—Western Michigan Electric Cooperative, Scottville, rural electric lines, Mason Co. $35,000.

Minnesota—RURAL ELECTRIC LINES—Faribault Co. Cooperative Elec. Assn., Frost, rural electric lines, Faribault Co. $50,000.

Minnesota—RURAL ELECTRIC LINES—McLeod Cooperative Power Assn., Glencoe, rural electric lines, McLeod Co. $55,000.

UNCLASSIFIED (Proposed Work, Cont'd.)

Minnesota—RURAL ELECTRIC LINES—Renville-Sibley Cooperative Power Assn., Fairfax, rural electric lines, Renville Co. $35,000.

Missouri — RURAL ELECTRIC LINES — Tri-County Electric Cooperative Assn., Lancaster, rural electric lines, Schuyler Co. $67,000.

Nebraska — RURAL ELECTRIC LINES — Chimney Rock Public Power Dist., Bayard, rural electric lines, Morrill Co. $40,000.

Nebraska—RURAL ELECTRIC SYSTEM—Highline Electric Assn., Main and Denver Sts., Holyoke, Colo., soon lets contract 118 mi. rural electric distr. and transmission project, Red Willow, Hitchcock and Hayes Counties. Rocky Mountain Eng. Co., 312 McClintock Bldg., Denver, 2, Colo., engrs.

★**Nebraska** — TRANSMISSION LINES — Loup River PP Dist., Harold Kramer, genl. mgr., Columbus, addnl. transmission lines, vicinity Columbus. $1,000,000.

New York—RURAL ELECTRIC LINES—Oneida-Madison Electric Cooperative, Inc., Bouckville, rural electric lines, Madison Co. $37,000.

N. Y., Richmond Hill—COAL POCKET—Long Island R. R. Co., C. M. Adams, ch. engr., Pennsylvania Station, New York, 19x37 ft. coal pocket on north side of Atlantic Ave., 110 ft. east of 121 St. $30,000. Roberts & Schaefer, Inc., 307 N. Michigan St., Chicago, Ill., archts.

†**N. Y., West Point**—RAILROAD TRACKS—U. S. Eng., 120 Wall St., New York, Zone 5, bids soon relocating railroad tracks and addnl. facilities. $400,000.

★**North Carolina**—FARM CONNECTIONS—Brunswick Electric Membership Corp., Shallotte, farm connections, Brunswick Co. $500,000.

★**North Carolina**—FARM CONNECTIONS—Pamlico-Beaufort Electric Membership Corp., Grantsboro, farm connections, Pamlico Co. $550,000.

North Carolina—FARM CONNECTIONS—Pitt & Greene Electric Membership Corp., Farmville, farm connections, Pitt Co. $300,000.

★**North Carolina**—FARM CONNECTIONS—Tri County Electric Membership Corp., Goldsboro, farm connections, Wayne Co. $800,000.

Ohio—RURAL ELECTRIC LINES—Morrow Rural Electric Cooperative Inc., Mount Gilead, rural electric lines, Morrow Co. $35,000.

Ohio—RURAL ELECTRIC LINES—Washington Electric Cooperative Inc., Marietta, rural electric lines, Washington Co. $40,000.

Oklahoma—GAS PIPELINE—Cities Service Oil Co., 4527 S. Oklahoma Ave., Oklahoma City, 35 mi. 6 in. welded pipeline from Blackwell to Burbank. $75,000.

Oklahoma—RURAL ELECTRIC LINES—Harman Electric Assn., Inc., Hollis, rural electric lines, Harmon Co. $100,000.

Pennsylvania—RURAL ELECTRIC LINES—Tri-County Rural Electric Cooperative Assn., Mansfield, rural electric lines, Tioga Co. $30,000.

Texas — TRANSMISSION LINE — Collins County Refrigeration Co-operative, Inc., McKinney, power transmission line farmstead connections, Collin Co. $25,000 REA allot.

Tex., San Angelo—STEEL TANK OIL STORAGE FACILITIES—Texas Minerals Co., San Angelo, steel tank oil storage facilities, 3 mi. northeast of here. Over $25,000.

★**W. Va., Princeton**—AIRPORT—Airport Comn., c/o County Court Clk. of Mercer Co., Princeton, airport construction. $1,600,000. R. T. Phelps, 1010 Longview Ave., Bluefield, engr.

Wisconsin—RURAL ELECTRIC LINES—Columbus Rural Electric Cooperative, Columbus, rural electric lines, Columbia Co. $40,000.

Que., Montreal—BOWLING ACADEMY—Estate Cuddy, c/o Marler & Marler, 360 St. James St., plans by J. C. McDougall, 1225 McGill College Ave., bowling academy. $60,000.

Que., Montreal—LAND DEVELOPMENT—Municipality, J. A. Mongeau, clk., City Hall, developing 35 acres land for playground in Ahuntsic Ward on Perras Blvd. $25,000.

Sask., Neidpath—RAILWAY GRADE—Dominion Govt., Ottawa, Ont., railway grade for diversion of section Canadian National R.R. from Mile 125 to Mile 128, 36,000 cu. yd. excav. and grading, 5,000 cu. yd. rock rip rap, corrugated iron pipe, etc. Prairie Farm Bd., 910 McCallum Hill Bldg., Regina, engr.

BIDS ASKED

Bids Asked July 24

†**Conn., Hartford**—POWER LINES—U. S. Eng., 419 Industrial Trust Bldg., Providence, R. I., underground power lines, service duct lines, Keeney Lane Pump Station, No. 45/1.

Bids Asked July 26

Colorado — RURAL ELECTRIFICATION, MATERIAL, etc.—Sangre De Cristo Electric Assn., Inc., Helen Kaess, secy., Salida, at office Rocky Mountain Eng. Co., engr., 312 McClintock Bldg., Denver, furnishing materials, supplies and equip. (Materialman's Proposal) for rural electrical transmission and distr. sys., Colorado 25A Chaffee.

Bids Asked About August 15

★**W. Va., Charleston**—AIRPORT BLDG., etc.—Civil Aeronautics Admin., 14 St. and Constitution Ave. N.W., Wash., 25, D. C., airport administration bldg., hangars, runways, grading, drainage, etc. $5,000,000. Whitman, Requardt & Smith, 1304 St. Paul St., Baltimore, Md., engrs. CD 5/3—ENR 5/11.

LOW BIDDERS

Calif., Bellflower—PARK—Los Angeles Co., Hall of Records, Los Angeles, July 5, partial development Bellflower Park, incl. playgrounds, utilities, grading, etc., from J. O. Oltmans & Sons, 510 E. 15 St., Los Angeles, $25,490. Alfred Jones, Hall of Rec. ords, Los Angeles, co. engr.

★**N. Y., Idlewild**—AIRPORT FILL—Dpt. Marine & Aviation, Pier A, New York, Zone 4, July 10, 8,500,000 cu. yd. hydraulic fill at airport, from Atlantic Gulf & Pacific Co., 13 Park Row, New York, Zone 7, $1,241,950. CD 6/29—ENR 7/6.

†**Va., Dahlgren**—PIER—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., July 5, pier at Naval Proving Ground, from Diamond Construction Co., 2801 8 St., N.E., Wash., D. C. $57,250. CD 6/27—ENR 6/29.

CONTRACTS AWARDED

†**Ala., Huntsville**—ADDITIONAL FACILITIES, etc.—U. S. Eng., Grant St. west of Westwood St., Mobile, Ala., addnl. facilities incl. outside utilities, Contr. W-01-076-eng-705, to A. Murphy, Memorial Apt., Nashville, Tenn., $57,679.

†**Ariz., Tucson**—TARGET RANGE—U. S. Eng., 751 S. Figueroa St., Los Angeles, 14, Calif., Poorman type target range at Davis-Monthan Field, Spec. 596, to J. S. Sundt, 440 S. Park Ave., $46,000.

★†**Calif., Alameda**—AIR STATION PERSONNEL FACILITIES—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., addnl. personnel facilities, Naval Air Station, Spec. 13753, NOY 9199, to Ford J. Twaits Co., 2502 Russ Bldg., San Francisco. $1,261,865. Bids 6/23.

Calif., Long Beach—PIER—City Harbor Dpt., 1333 Embarcadero, impry. Pier A, Spec. H-170, Sect. A, asphaltic concrete paving and Sect. C furnishing decomposed granite, to Asseo Constr. Co., 2725 Atlantic Blvd., $39,779; Sect. D, grading, draining, to Owl Trucking & Constr. Co., Compton, $53,919. CD 7/6—ENR 7/13, under LB.

†**Calif., March Field (br. Riverside)**—TARGET RANGE—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, Poorman type target range, to Scherer & Prichard, 2095½ Orange St., Redlands, $46,000.

†**Calif., Muroc**—HANGAR DOORS, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, installing, constructing hangar doors, at Depot Supply Hangars, Spec. 667, to Truscon Steel Co., 5460 E. Salsuon Ave., Los Angeles, $166,000; Poorman type target range, to R. J. Daum, 6803 West Blvd., Los Angeles, $13,300, both at Army Air Field. Bids 6/29.

†**Calif., Van Nuys**—AIRPORT BLDGS.—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, moving and rehabilitating bldgs. from San Fernando to Metropolitan Airport, Spec. 573, to P. A. Weeger, 4545 Santa Monica Blvd., Los Angeles, $66,895.

Colorado—GRADING AND TRACK EXTENSION—Denver & Salt Lake Ry. Co., W. McCarthy, chm. Bd. and pres., Denver Natl. Bldg., Denver, grading and track exten. between Denver and Orsted, to Schmidt & Hawkins, Kremmling, $87,000.

†**Del., Dover**—APRONS, etc.—U. S. Eng., Penn Mutual Bldg., 6 and Walnut Sts., Phila., Pa., aprons and access roads, Contr. W-36-109-eng-721, to George & Lynch, Delaware Trust Bldg., Wilmington, $174,457.

†**Fla., Drew and MacDill Fields (br. Tampa)** — AIRFIELD BLDGS., etc. — U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, trainer bldgs., converting warehouse, Contr. W-08-123-eng-409, to Southern Builders, Inc., P. O. Box 1187, Tampa, $46,000.

†**Fla., Jacksonville**—AIR STATION BARRACKS—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., 4 B1B barracks, incl. services, Naval Air Station, NOY 9638, to Paul A. Miller Constr. Co., Leesburg, $150,911.

†**Fla., Pensacola**—AIR STATION BLDG.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., recreation bldg., Naval Air Station, NOY 7888, to Algernon Blair, First National Bank Bldg., Montgomery, Ala., $48,638.

†**Fla., Whiting Field**—RUNWAY LIGHTING INSTALLATION—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., runway lighting installation for North Field, Naval Auxiliary Air Station, NOY 9969, to Robers Electric Co., 4613 Tenth Ave. N., Birmingham, Ala., $20,679.

†**Ill., Glenview**—RUNWAYS, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., runways and catapult strips for carrier landing practice, Naval Air Station, NOY 9421, to Thos. McQueen Co., 4610-20 W. Van Buren St., Chicago, $414,000.

★**Ia., Waterloo** — AIRPORT — Civil Aeronautics Admin., 410 E. 12 St., Kansas City, Mo., airport construction, to Concrete Materials & Constr. Co., Grandby Bldg., Cedar Rapids, $1,178,019. Bids 7/1. CD 7/7—ENR 7/13 under LB.

★†**Kan., Newton**—APRON, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., warm-up apron and runway drainage, taxiway, NOY 10237, to Bonness & Bloomer, 1409 N. 27 St., Milwaukee, Zone 3, Wis., $1,021,750. CD 6/28.

Kentucky — RAILROAD — Chesapeake & Ohio Ry. Co., C. Miller, asst. ch. engr., 425 Main St., Richmond, Va., 4 mi. Beaver Creek Spur Line near Elcorn City, and 1.5 mi. Caney Creek Spur Line, near Prestonberg to Walsh Constr. Co., 41 East 42 St., New York 17, N. Y., $650,000 and $35,000 respectively.

Louisiana—OIL PIPELINES—Ohio Oil Co., Midstates Oil Corp., Gulf Refining Co. & Associates, City Bank Bldg., Shreveport, 105 mi. 4- to 10-in. pipelines in fields adjacent to cycling plant, Haynesville area, Claiborne Parish to Sharman & Allen, Oil Gas Bldg., Houston, Tex., $320,000.

†**La., Lake Charles**—POSITION FIRING COURSE—U. S. Eng., 25 St. and Avenue F, Galveston, Tex., position firing course, to W. D. Peck & Co., Citizens State Bank Bldg., Houston, Tex., approx. $25,000.

†**N. M., Roswell**—AIRFIELD IMPROVEMENTS—U. S. Eng., 4 and Gold Sts., Albuquerque, N. M., addnl. airfield imprvs., incl. roads, etc., to Austin Road Co., 1812 Clarence St., Dallas, Tex., $276,475.

★†**O., Wright Field (br. Dayton)**—TAXIWAYS, etc.—U. S. Eng., Wright Field, Dayton, taxiways, access and service roads, Contr. W33-044-eng-136, to F. S. Tillman, P. O. Box 996, Dayton, $478,042; constructing addnl. facilities, etc., Contr. W-33-044-eng-139, to W. L. Johnson Constr. Co., & Associates, Hicksville, $58,148. CD 6/7—ENR 6/15.

†**Okla., Oklahoma City** — SOUND ABSORBING BAFFLES—U. S. Eng., 416 Wright Bldg., Tulsa, Zone 2, sound absorbing baffles in engine test bldg., to Armor Insulating Co., 800 Forrest St. N.W., Atlanta, Ga., $33,900. CD 6/27—ENR 6/29.

★†**Pennsylvania**—AIRPORT BLDGS.—U. S. Eng., Standard Oil Bldg., Baltimore, Md., military housing, Moon Twp. Airport, to Mellon Stuart Co., 310 E. Parkway, Pittsburgh, $848,543. CD 7/5—ENR 7/13.

†**Pa., Olmsted Field (sta. Middletown)**—AIRFIELD BLDGS.—U. S. Eng., Standard Oil Bldg., Baltimore, Md., warehouse and reclamation bldg., Contr. W-18-020-eng-544, to Ritter Brothers, 1511 N. Cameron St., Harrisburg, $144,710.

†**S. C., Charleston**—STORAGE RACKS—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., steel plate and shape storage racks, NOY 10281, to C. Y. Thomason Co., Greenwood, $39,791.

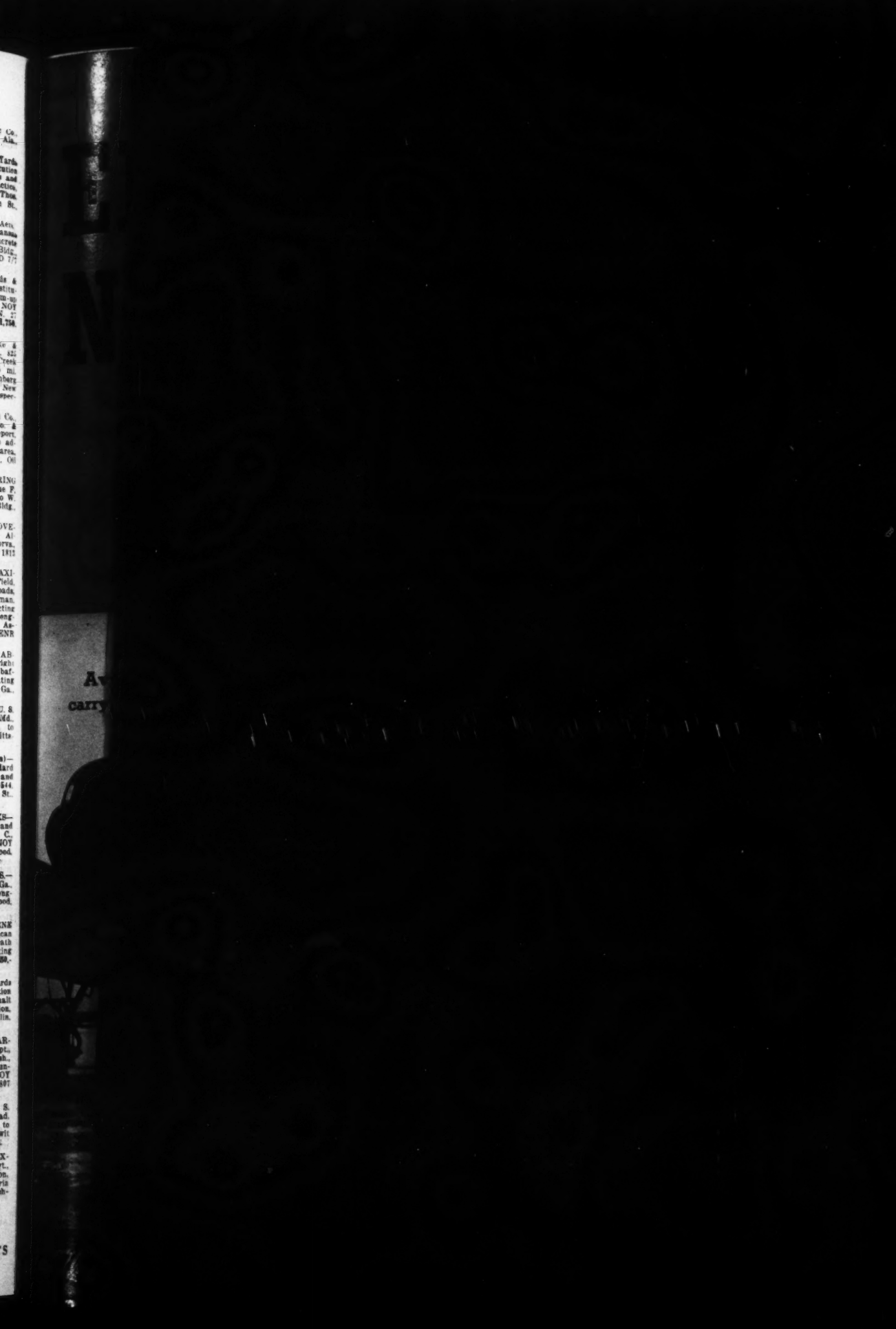
†**S. C., Walterboro**—AIRFIELD BLDGS.—U. S. Eng., Post Office Bldg., Savannah, Ga., miscellaneous bldgs., Contr. W-09-123-eng-250, to C. Y. Thomason Co., Greenwood, $83,546. CD 6/20—ENR 6/22.

Tex., Galveston — OXYGEN ACETYLENE SYSTEM—Todd Shipbuilding Co., Pelican Dike, Oxygen Acetylene sys. (underneath docks) to Swanson Plumbing & Heating Co., 5707 Navigation Blvd., Houston, $30,000.

†**Va., Franklin**—PARKING AREA—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., addnl. asphalt parking area, Naval Auxiliary Air Station, NOY 9591, to H. Scott, Inc., Franklin, $101,631.

†**Wash., Seattle**—AIR STATION BARRACKS, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., Wave barracks, JOQ'S, and gunnery training bldg., Naval Air Station, NOY 9796, to J. C. Boespflug Constr. Co., 807 Securities Bldg., Zone 1, $280,460.

†**Wash., Tulalip**—RAILROAD, etc.—U. S. Eng., 800 Third Ave., Seattle, railroad, road, appurtenances, Contr. 45-103-engr-587, to South Constr. & Engr. Co., and Peter Kiewit Sons Co., 1403 W. 45 St., Seattle, $336,000.

Que., Grande Riviere—FISHERIES EXPERIMENTAL STATION—Dominion Govt., Ottawa, Ont., fisheries experimental station, to Newton Constr. Co., Ltd., 150 Victoria St., Sherbrooke. Est. $40,000. Dpt. Fisheries, Ottawa, Ont., engrs.

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